2019

Undergraduate Course Catalog [January-June 2019]

St. Cloud State University

ST. CLOUD STATE
UNIVERSITY

EDUCATION FOR LIFE.

University Catalog

Jan 1, 2019 – Jun 30, 2019

Archive

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Welcome Page

Welcome!

A St. Cloud State education is earned by exploring opportunities, applying knowledge to real-world problems, engaging in your community and being challenged by new ideas and perspectives.

Use our catalog to organize your pursuit of a St. Cloud State bachelor's, master's or doctoral degree.

Search our programs with online courses available.

Important Changes to Note

Much of the programmatic information and policies that used to be found within the University Catalog have been migrated to other websites.*(See campus resources below.)*

- Academic policies are now all available from one central Policies Web site.
- Program information outside of academic requirements will now be found on the individual undergraduate or graduate program site.

Campus Resources

The following resources are available to assist you as you plan your course of study. (These links will open in a new window.)

About St. Cloud State
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Academic Programs

Program information contained within this Catalog includes academic requirements for admission and completion of the program. Other helpful information about the programs can be found on individual Department Web sites for undergraduate programs and on Graduate Admissions Web site for graduate programs.

Pre-Professional

Pre-Professional Programs

Degree Programs

SCSU offers a number of programs which prepare students for post graduate work in professional areas. Preparation requires a baccalaureate degree. Some, such as pre-medicine are very specific; others are more liberal arts oriented, such as pre-law. Students should meet with advisers who will assist them in selecting the program best suited to their graduate school and career goals.

Non-degree Programs

In some instances students may elect to begin study in areas for which SCSU has no degree program. Preparation for transfer then is required. Some areas of pharmacy, etc., fall into this category. Students should be aware of requirements selected by the institution to which they will transfer, and should meet with an academic adviser well versed in these requirements.

Undergraduate preparation and advising is available for the following:

- Chiropractic
- Dentistry
- Law
- Medicine
- Mortuary Science
- Occupational Therapy
- Optometry
- Pharmacy
- Physical Therapy
- Physician Assistant
- Veterinary Medicine

Pre-Chiropractic

Adviser: Timothy Schuh
224 Robert H. Wick Science Building
320-308-5433

Students should consult the pre-chiropractic adviser during their first semester at St. Cloud State University. It is advisable that students get a baccalaureate degree; the biomedical science major is recommended. Pre-professional course requirements generally include: 2 semesters animal biology with labs, 2 semesters general chemistry with labs, 2 semesters organic chemistry with labs, 2 semesters general physics with labs, 1 semester general psychology, 1 semester English, 1 semester Speech, and 15 additional credits of humanities and social sciences.

Pre-Dentistry

Adviser: Maureen Tubbiola
226 Robert H. Wick Science Building
320-308-4736
mltubbiola@stcloudstate.edu

Courses specified for admission to the University of Minnesota include: English: 8 semester credits (composition courses preferred); biology: 8 semester credits; physics: 8 semester credits; chemistry: inorganic and organic chemistry and at least 1 semester biochemistry; math: minimum of 3 semester credits of college algebra, pre-calculus, computer science or statistics; applied human psychology: 3 semester credits. Suggested courses to fulfill those requirements include: BIOL 151, 152, 262, 360; CHEM 210, 211, 310, 311; 241 or 480, 481; ENGL 184, 191, 331, 332, 333; MATH 112 or 115; PHYS 231, 232; PSY 115. Courses such as CMST 192, ART (100-level courses in beginning drawing) are highly recommended. Requirements do change and interested students should check with the dental school(s) where they plan to apply.

Pre-Law

Adviser: Kathleen Uradnik
51B 309
320-308-4132

Students must complete a bachelor's degree before law school and may major in any field. Law schools prefer a broad-based course of study that emphasizes analytical thinking and writing. Although pre-law is not a major, new students who have not declared a major may write "pre-law" on the appropriate forms to be assigned to the SCSU Pre-

Law Advisor. She will work with you to find an appropriate major. Students are encouraged to contact the Pre-Law Advisor regularly, starting early in their academic careers. The Pre-Law Advising Office offers extensive information about all stages of the law school application process; stop by to pick up Professor Uradnik's pre-law advising CD-Rom, a comprehensive advising tool distributed free to SCSU students.

Pre-Medicine

Advisers (Biological Sciences):
Marina Cetkovic-Cvrlje
268 Robert H. Wick Science Building
320-308-3490
Oladele Gazal
227 Robert H. Wick Science Building
320-308-3045
Timothy Schuh
224 Robert H. Wick Science Building
320-308-5433
Maureen Tubbiola
226 Robert H. Wick Science Building
320-308-3035

Pre-medicine is not a major; students should plan to complete a bachelor's degree before entering medical school and may elect to major in a variety of fields. Most medical schools require that certain basic courses be completed before entering medical school. These include one year of biology, inorganic and organic chemistry, one year of physics, mathematics through calculus, 6 semester credits of English composition as well as courses in the humanities and behavioral sciences. Examples of science courses would be BIOL 151, 152, 262, 360; CHEM 210, 211, 310, 311; and PHYS 231, 232. At least one semester of biochemistry is now required by some schools. Some students who do not have any background in one of the science areas may elect to take general education courses before beginning the 200 level courses that do meet the medical school requirements for admission. The behavioral science requirement is usually 8 semester credits in areas such as psychology, sociology, or anthropology. The basic requirement for humanities is also 8 semester credits. The required courses may vary from year to year and students are strongly urged to meet with the adviser.

Pre-Mortuary Science

Adviser: Aaron Peterson
215C Brown Hall
320-308-4236

The pre-mortuary program is that suggested by the University of Minnesota, where most students transfer after two years at SCSU. Credits taken here apply toward the B.S. degree in mortuary science at the University of Minnesota. Pre-professional requirements include at least one course in each of the areas of English composition, general biology with lab, human anatomy and physiology, statistics, general chemistry with lab, introduction to sociology, speech, general psychology, and accounting plus sufficient electives to total the equivalent of 60 semester credits. Contact your adviser for a more detailed description of the courses.

Pre-Occupational Therapy

Advisers: Aaron Peterson
215C Brown Hall
320-308-4236

Pre-occupational therapy is not a major; students should plan to complete a bachelor's degree before applying to an advanced degree program in occupational therapy. Pre-professional course work typically includes courses in human anatomy, human physiology, statistics, general psychology, medical terminology, abnormal psychology, life span developmental psychology, introductory sociology and studio/applied arts.

Pre-Optometry

Adviser: Oladele Gazal
227 Robert H. Wick Science Building
320-308-3045

Two years of college is the minimum required for admission to optometry school. However, the trend is for most entering students to have a four-year bachelor's degree in biology, chemistry or physics. The following courses should be included: BIOL 151, 152, 262, 360, 362, 366, 478; CHEM 210, 240, 241; ENGL 191, 332; MATH 115, 211, 212; STAT 319; PHYS 231, 232; PSY 115. Electives should include 8-12 credits in the social sciences. CHEM 270, 271 may be substituted for CHEM 310, 311 and MATH 221, 222 may be preferred at some schools over MATH 211, 212. Applicants should contact the schools they are interested in for details on course requirements. Students should apply to take the optometry college

admission test during the year before they apply to an optometry school.

Pre-Pharmacy

Adviser: Mark Mechelke
WSB 370
320-308-2030

Students must complete at least two years of college before applying to a pharmacy program, but most students accepted have completed a 4-year undergraduate degree. The courses listed below comprise typical pre-pharmacy courses. Different colleges of pharmacy have slightly different pre-pharmacy requirements. Students should consult early with the advisers for specific requirements. BIOL 151; BIOL 206 or 362; BIOL 262, 360 or 480; BIOL 202 and 204 or BIOL 366 and 478; CHEM 210, 211, 310, 311; 2 social/behavioral science courses; ENGL 191; ENGL 331 or 332; MATH 221; STAT 219 or 229 or 319 or 353; PHYS 231 and 232 or 234; CMST 192, 211 or 220.

Pre-Physical Therapy

Advisers: Aaron Peterson
215C Brown Hall
320-308-4236

Pre-physical therapy is not a major; students should plan to complete a bachelor's degree before applying to a university which offers an advanced degree in physical therapy. Many students elect to complete a Biomedical Science degree at SCSU with additional pre-professional courses as required for admission by the graduate programs in Physical Therapy. Pre-professional courses generally include 2 semesters general biology with labs, 2 semesters general chemistry with labs, and 2 semesters general physics with labs. In addition, one course each in human physiology, human anatomy, general psychology, abnormal psychology, and statistics is typically required. Some programs also require one calculus course. For specific details, please contact the adviser.

Pre-Physician Assistant

Adviser: Maureen Tubbiola
226 Robert H. Wick Science Building
320-308-3035

Pre-physician assistant is not a major at SCSU; however, students should plan to complete a bachelor's degree before entering a university which offers a master's degree. In preparation for any physician assistant program the following courses should be included: BIOL 151, 152, 262, 266, 360, 366, 478; CHEM 210, 211, 310, 311, 480; MATH 221; STAT 319; PSY 115, 490. English composition skills and courses in the humanities and behavioral sciences are needed. Health care experience with some direct patient contact is required for most programs. Applicants should contact the schools they are interested in for details on course requirements. Contact the adviser for more detailed description of the courses and requirements.

Pre-Veterinary Medicine

Adviser: Heiko Schoenfuss
273 Robert H. Wick Science Building
320-308-3130

BIOL 151, 152, 214 (or 441 or 446), 262, 360, 362; MATH 112 or 221; CHEM 210, 211, 310, 311, 489; PHYS 231, 232; ENGL 191; CMST 192; and 12-18 credits in the Social Sciences and Arts and Humanities. All pre-veterinary students should consult with the program advisers as soon as possible upon admission to construct an academic plan.

University Honors Program

Mission

The University Honors Program (UHP) is a highly selective interdisciplinary program that provides the educational foundations in the liberal arts of a student's undergraduate career through the majors to a bachelor's degree. It is distinguished by its small classes and student-centered pedagogy. The UHP invites creative topics from instructors. Students and faculty alike benefit from the excitement of trying educational innovations.

Its classes promote discussion, cooperative learning, and independent exploration. The learning community is strengthened by the Honors Club and the option of living on an Honors residential floor.

The academic aims of the University Honors Program
In Honors classes the student will:

1. Develop advanced skills in written and oral communication, in creative and critical thinking and problem solving.

2. Develop competency in independent intellectual exploration and cooperative learning.
3. Gain familiarity with ideas from a range of academic disciplines.
4. Discover the interrelatedness of knowledge and values from various fields.
5. Explore diversity as a fact and value in human lives and cultures.
6. Practice the habits necessary for life-long learning and leadership.

The University Honors Club

All Honors students are invited to participate in the Honors Club. Club members welcome new Honors students, recruit instructors, and participate in community building. They provide the student voice in shaping the program. The club's social activities, educational activities and service projects enable students to practice leadership and strengthen the Honors learning community. Honors students also are expected to participate in the University's other extracurricular activities, leadership development, and/or service learning through their years on campus.

International Opportunities

In addition to SCSU's overseas campuses, the University Honors Program is associated with the Centre for Medieval and Renaissance Studies in Oxford, England. Through the Centre, selected Honors students are able to experience British university life, tutorials, lectures and classes. Students are in residence at the Centre for one or two semesters. Courses taken in Oxford and SCSU’s other study abroad programs may be used to fulfill Honors requirements by approval of the Honors Director.

Admission

Students can be admitted into Honors by several paths. Whether a student is an incoming freshman right out of high school, a transfer student from another college or university, a member of an Honors program at another college or university, or currently enrolled at St. Cloud State University as a general education student, there is a particular procedure for admission to the program.

Students applying from high school should be in approximately the top ten percent of their graduating class with strong college test scores, have a record of participation in school and community activities, and demonstrate writing skills through a required short, imaginative essay.

International students and students already enrolled in college who apply to Honors will be asked to provide comparable information. Students who are currently enrolled at St. Cloud State University and wish to apply to Honors need supply a faculty reference letter and evidence of a GPA of 3.5. If a student has less than a year of college credits upon the transfer, she/he must provide both college and high school transcripts when applying.

A student transferring to St. Cloud State University from an honors program at another institution may be admitted directly to the program. The student must show reasonable evidence of membership in the previous university’s honors program.

The Honors Guest Pass

On rare occasions a student who is finished with Liberal Education requirements will join Honors on a Guest Pass to take a limited number of Honors courses. The Guest Pass does not bring priority registration with it, nor an expectation of completing Honors requirements. The requirements described below pertain to “regular” Honors students, not to the Guest Pass.

Honors and Liberal Education

Honors is an alternative track to the Liberal Education requirements at SCSU. Many requirements are parallel. Students do not usually need to meet both Honors and Liberal Education requirements. Some majors and pre-major programs require specific Liberal Education courses; in each such case, either that course substitutes for an Honors requirement or there is an Honors course that counts in place of the specific Liberal Education course.

Honors advisers will show how all these details apply to your personal educational goals. The Honors office has specific advising checklists for many majors. There is more information below, throughout the description of the Honors Program and its overlaps with the Liberal Education Program.

Honors and the Minnesota Transfer Curriculum

Honors course requirements are organized into eleven Goal Areas, parallel to the ten Goal Areas of the Minnesota Transfer Curriculum

(MnTC). Completion of any of Honors Program Goal Areas 1 to 10 also completes the parallel Goal Area in the MnTC, and vice versa for students joining Honors at SCSU with prior credits. Completion of Honors requirements completes the MnTC and facilitates transitions in and out of Honors, both within St. Cloud State University and between public colleges and universities in Minnesota. See Continued Progress Towards Graduation After Withdrawal From Honors below.

Honors Priority Registration

For the first semester at SCSU, Honors students will register on their regular new student or transfer student Advising and Registration Day. Each semester after that, Honors students (not on a Guest Pass) will have an early registration window. They are to see an Honors advisor to obtain their access code each semester until accepted into a major.

40 credits minimum, comprising at least 37 in HONS courses and/or approved substitutions, plus 3-4 credits of a language. If a course counts in more than one Honors Goal, the credits must be made up by other HONS coursework to total 40 credits in all.

Extracurricular Participation in Honors. Each Honors student is expected to participate for four years in Honors Program and Honors Club campus and community activities, including service learning as part of the Seminar 100 course. See the program directors and Honors advising staff for details. This expectation is not a graduation requirement, but it is expected for continuation in Honors.

Taking Honors courses to meet Honors requirements. An Honors adviser may approve specific substitutions of Liberal Education courses for Honors requirements, as needed, due to course availability or to meet major or pre-major requirements. In some Goal Areas, taking a Liberal Education course is the norm. See below for automatic course substitutions. See an Honors Program advisor about specific course substitutions needed in your major.

Honors Seminar I (HONS 100, 2 cr.) and **Honors Seminar II** (106, 1 cr.) This 3-credit sequence introduces the academically accomplished student to the academic life of the university, adjustment to learning at the university level, use of campus and community resources, service learning, leadership development, and community building in Honors and in the university. It includes a common reading experience as well as a research component culminating in the Honors Research Colloquium in the spring.

Program Requirements: Goal Areas

The remaining requirements are organized under ten Goal Areas.

Students wishing to transfer to another state college or university in Minnesota will find, below, a comparison with the Goal Areas of the Minnesota Transfer Curriculum.

GOAL 1: Communications (7 credits)

Communication Studies; required: HONS 170 (substitutes for CMST 192 in any SCSU requirement).

Written composition, 4 cr.; select one: HONS 160, 161, 163 (substitutes for ENGL 191).

Some transfer or pre-college credits may meet one or both parts of Goal 1. (The same is true throughout the eleven Goal areas, and all students are advised to get their credits transferred and evaluated at St. Cloud State promptly after earning those credits. If you are waiting for test scores or credits transfer, see an advisor so as to avoid taking classes you will later transfer in.)

GOAL 2: Philosophy (3 credits)

Select one: 250, 251, 253.

GOAL 3: Natural Sciences (Minimum of two courses, 3-4 credits each, no more than 4 credits from one department. One course must include a lab or field component; the second may be a natural science course with or without a lab or an environmental science course.

Required: BOTH an Honors Lab or Field Science course – select one: 130, 131, 133;

AND EITHER an additional Honors science from another department – select one: 130, 131, 133, 140, 141, 143;

OR Honors environmental science, also by a different department – select one: 220, 221, 223, 420, 421, 423.

See also automatic substitutions for natural science classes, below. See below for a comparison with

Goals 3 and 10 of the Minnesota Transfer Curriculum.

GOAL 4: Mathematical/Logical Reasoning (3 credits)

Select one: 110, 111, 113 (Substitutes for MATH 193 in any SCSU requirement) Also see automatic substitutions below.

GOAL 5: History and the Social and Behavioral Sciences (Minimum 3 credits)

Select one: 260, 261, 263, 460, 461, 463. Future business, nursing, or education majors should also see an Honors advisor about Goal 5.

GOAL 6: Humanities and Fine Arts (Minimum 6 credits, no more than 3 credits from one department.)

One Humanities course: 240, 241, 243, 440, 441, 443. The Humanities portion of Goal 6 can also be met by an Honors philosophy class (250, 251, 253) which may then double count in Goal 2; but then the 3 credits would have to be made up somewhere among any of the eleven Goals. This is true of double counting in any of the eleven Goal Areas: the total must always come to 40 cr.

One Fine Arts course: 230, 231, 233, 430, 431, 433.

GOAL 7: Human Diversity (Minimum 3 credits)

Select one course for the university’s list of Racial Issues courses in the General Education section of this Catalog.

GOAL 8: Global Perspectives (Minimum 3 credits)

Required: Any foreign language. The student will then take a course with global perspective in this Goal Area, by advisor approval.

Although we require only one language course in Honors, we encourage a year or more of one language, and some smaller majors also require the student to take a minor or a year of language. Students who build on previous language background can take a course level 102 or higher, and thereby enjoy increased fluency and expanded global awareness. With higher language course placement, students often have the option to buy back credits which count towards graduation. (See Foreign Languages & Literature: Retro-credit guidelines.) Students who take more than the required number of foreign language courses are at an advantage for overseas study and graduate school admissions.

GOAL 9: Ethical and Civic Responsibility (Minimum 3 credits)

Select one: 210, 211, 213, 410, 411, 413.

GOAL 10: Environmental Issues (3 credits)

Students may take courses numbered 220, 221, 223

Diversity course requirement (9 cr.)

To complete the Honors Program requirements, the combination of all courses taken at St. Cloud State must include three courses (9 cr.) with Diversity related content, including one focusing on gender or women's issues. The required Racial Issues course in Goal 7 counts as 3 of the 9 Diversity credits. Students may obtain the other 6 Diversity credits through HONS, major, minor, or university elective courses. HONS course numbers ending in “1” designate the required Diversity content; numbers ending in “3” designate Diversity content related to gender or women (one required in Honors).

If a designated Diversity course is taken outside of Honors, it will count toward the university’s Diversity requirement, but *will not substitute for an Honors course* without approval by the program director. The presumption is that they will not substitute for Honors courses but do automatically count as Diversity credits. (Being in Honors includes a commitment to meet Honors requirements by taking HONS courses, with exceptions in mathematics, natural science, and Racial Issues; see “Automatic Substitutions,” below.)

Most students will get the additional 6 credits of Diversity by choosing an HONS course ending in a “3” and another ending in a “1” or a “3” from among the courses that also count in the eleven Goal Areas above. Students who enter the university with a substantial number of applicable General Education credits may have their Diversity requirement reduced, as described in the Liberal Education section of this Catalog.

Racial Issues (RIS)

The University's graduation requirement of a 3 cr. Racial Issues course completes Goal 7 of the Honors

Program. See the list of Racial Issues courses in the Liberal Education section of this Catalog.

Bilingual Students

The Honors director will waive the language requirement for bilingual international students and Americans fluent at an adult level of daily usage in a language other than English. This is defined as the advanced level of performance according to ACTFL guidelines. Students who choose this option must still meet the 40-credit minimum total by taking additional Honors courses with global perspective content to fulfill Goal 8 of the Honors requirements. See the Honors Program director to approve a global perspectives course.

Honors Course Substitutions

The required 40 crs. of HONS classes, language classes, and automatic substitutions described below, can be reduced in various ways if approved in writing by the Honors director or an Honors staff advisor. This includes:

a. College credits acquired before being admitted to the SCSU Honors Program.

b. Liberal Education credits earned at SCSU's overseas programs. These course substitutions require specific approval, in cooperation with SCSU’s Center for International Studies.

Double Counting

Double counting of Honors courses in majors is usually not allowed in the Honors program, with the exception of language courses used to count towards a language major or minor or an Area Studies program. However, courses which can double-count in the Liberal Education program and the student’s major, or waive a Liberal Education requirement, can also double-count in Honors with Honors Director or advisor approval. On the other hand, students who take unapproved non-HONS courses, intending to substitute them, will normally not be able to use them to meet Honors Program requirements. A student who pursues a Liberal Education course of study towards graduation requirements may be dropped from the Honors Program and thus lose priority registration and other benefits of being in Honors. Please consult with an advisor rather than assuming a substitution will be valid.

Repeating Honors Courses for Credit

Repeating courses may be useful to the student who has double-counted a course in more than one Goal Area and thus needs to take additional coursework for a total of 40 credits to meet Honors Program requirements. Most HONS courses are repeatable for up to 6 credits when taken with different content, as noted in the individual course descriptions below. The non-repeatable HONS courses are 100, 106, 110, 111, 113, 170, 180, 181, 183, and 196.

Pre-Major Advising

Honors, as an alternative to the Liberal Education requirements, is compatible with all majors and minors. Thus if your major will require a specific, basic mathematics course, you should assume it will also meet the Honors mathematics requirement, just as it would in Liberal Education Goal 4. Some majors require completion of specific Liberal Education courses prior to admission to the major; English composition and Communications Studies are common examples. Honors students will take Honors versions of these classes *instead of, not in addition to*, Liberal Education courses. For example, Honors students will take HONS 160, 161, or 163 when pre-major requirements include ENGL 191, and take HONS 170 when pre-major requirements include CMST 192. Similarly, Honors students may take HONS 110 in lieu of MATH 193. Prospective Art majors should take ENGL 198 or ART 198 rather than a composition course in the HONS 160 series. Please see an Art advisor.

In Honors advising, we follow the principle that a student will never be disadvantaged for being in Honors. If you discuss your preliminary ideas for a major with an Honors advisor, we can help you plan your progress on both Honors and early pre-major requirements or try out ideas for a major. At the same time, you should get more detailed advising from your prospective major department.

Some majors at SCSU begin right away in a student's first semester and require careful planning in order to finish in four years. In all these cases either we have worked out agreements with the major department as to how Honors students can economize on credits, or we will work out an individual plan with you and your major department. For example, if you are headed for Engineering, Mass Communications, or Nursing, you should start planning with us during your spring or summer Advising and Registration Days, before your first

semester. The same is true to a lesser degree for students in pre-Business and any of the natural or social science majors.

The Pass-Fail Option

Honors students may take one non-Honors course for S/U grading, by permission of that department's course instructor and the Honors director. Permission must be arranged by the end of the first week of the class. Normally this option is used to enable students to explore an advanced topic for which they lack formal prerequisites.

Continuation in the Honors Program

If an Honors student’s cumulative grade point average falls below 3.0, the student will be placed on probation in the Honors Program, and will have one semester to raise their GPA to 3.0 before being dismissed from the program. Those concerned about their probation status should make an appointment to meet with the Honors Director to discuss continuation in the program.

Withdrawal

A student may withdraw from the University Honors Program at any time. Students who consider withdrawing, for whatever reasons, are encouraged to discuss their reasons with the Honors director. An Honors advisor can help the student work out an individual transition plan to either Minnesota Transfer Curriculum or Liberal Education with no loss of credits except for HONS 100 and 106, which can be counted as university electives.

Continued progress towards graduation after withdrawal from Honors

Students who have begun in Honors at SCSU and discontinued voluntarily or on account of a lower GPA may continue to meet university graduation requirements by using Liberal Education courses to complete either the Liberal Education Program or Goal Areas 1 to 10 of the Minnesota Transfer Curriculum. Credits earned in Honors, with the possible exception of 100 and 106, can apply to either the Liberal Education program or the MTC; please see an Honors Program advisor for help with the transition. The Diversity and Racial Issues requirements still apply, as well as PESS 122 and other credit requirements described elsewhere in this Catalog.

Recognition Upon Graduation

Those graduating Honors Program students who have achieved a cumulative grade point average of at least 3.25 for all work taken and have completed the Honors requirements will receive the “University Honors Program” designation at the top of their official transcript.

Recognition of Honors Program completion is not the same as “graduating with honors.” The latter term simply means that any St. Cloud State University student with a grade point average of 3.0 or higher will be honored *Cum Laude, Magna Cum Laude*, or *Summa Cum Laude* upon graduation. *These grade point recognitions are independent of being in the University Honors Program.* See “Graduating with Honors,” in this Catalog.

Degree Maps

Accounting: Degree Maps

- Bachelor of Science: Accounting (Updated: 9/14/2018)

Anthropology: Degree Maps

- Bachelor of Arts: Anthropology (Updated: January 2018)

Art: Degree Maps

- Bachelor of Arts: Art (Updated: March 2014)
- Bachelor of Arts: Art History (Updated: March 2014)
- Bachelor of Arts: Double Major Art and Psychology (Updated: March 2014)
- Bachelor of Science: Art Education K-12 (Updated: March 2015)
- Bachelor of Fine Arts: 2D Media (Updated: March 2014)
- Bachelor of Fine Arts: 3D Media (Updated: March 2014)
- Bachelor of Fine Arts: Graphic Design (Updated: March 2014)
- Bachelor of Fine Arts: Integrated Media (Updated: March 2014)

Atmospheric & Hydrologic Sciences: Degree Maps

- Bachelor of Arts: Earth Sciences
- Bachelor of Science: Earth and Space Science/General Science Education, Grades 5-12 (teaching) (Updated: November 2012)
- Bachelor of Science: Earth and Space Science/General Science Education, Grades 9-12 (teaching) (Updated: November 2012)
  Bachelor of Science: Environmental Engineering (Updated June 2018)
- Bachelor of Science: Hydrology (Updated: November 2012)
- Bachelor of Science: Meteorology with MATH 112 (Updated: April 2019)
- Bachelor of Science: Meteorology with MATH 115 (Updated: April 2019)
- Bachelor of Science: Meteorology with MATH 221 (Updated: April 2019)

Biology: Degree Maps

- Bachelor of Science: Biomedical Science (Update: November 2015)
- Bachelor of Science: Biochemistry and Molecular Biology: Biotechnology (Updated: November 2017)
- Bachelor of Science: Science Teaching, Life Science General Science 5-12 (Updated September 2016)
- Bachelor of Science: Science Teaching, Life Science 9-12 (Updated September 2016)
- Bachelor of Science: Biology: Biodiversity, Ecology and Evolution (Updated: September 2018)
- Bachelor of Elective Studies: Life Sciences (Updated: June 2018)

Chemistry and Biochemistry: Degree Maps

- Bachelor of Science: ACS Chemistry (Updated: 8/18)
- Bachelor of Science: ACS Biochemistry (Updated: 10/18)
- Bachelor of Science: ACS Chemical Physics (Updated: 10/18)
- Bachelor of Science: ACS Environmental Chemistry (Updated: 10/18)
- Bachelor of Science: Biochemistry (Updated: 10/16)
- Bachelor of Science: Biochemistry and Molecular Biology: Biochemistry (Updated: 10/18)
- Bachelor of Science: Chemistry Education Grades 9-12 (Updated: 11/18)
- Bachelor of Science: Chemistry/General Science Education Grades 5-12 (Updated: 10/18)

Child & Family Studies: Degree Maps

- Bachelor of Science: Early Childhood Education Licensure (Updated: 5/17/17)

Communication Sciences & Disorders: Degree Maps

- Bachelor of Science: Communication Disorders (Updated: 2/11/2019)
- M.S. in Communication Sciences and Disorders: Phase I or Post-Bacc (Updated 2/21/2017)
- M.S. in Communication Sciences and Disorders: Phase II (Updated 2/21/2017)

Communication Studies: Degree Maps

- Bachelor of Arts: Communication Studies (Updated: 3/4/2013)
- Bachelor of Arts: Supplementary Major (Updated: 11/22/2011)
- Bachelor of Science: Communication Arts and Literature (teaching)
- Bachelor of Science: Communication Studies Interdepartmental (Updated: 11/22/2011)

Community Psychology, Counseling & Family Therapy: Degree Maps

- Bachelor of Science: Chemical Dependency Program and Certificate (Updated: October 2012)
- Bachelor of Science: Community Psychology (Updated: September 2017)

Computer Science & Information Technology: Degree Maps

- Bachelor of Science: ABET Accredited Computer Science Major (starting with discrete math and CSCI 201) (August 2017)
- Bachelor of Science: ABET Accredited Computer Science Major (starting with pre-calculus and CSCI 200) (August 2017)
- Bachelor of Science: Information Technology Security (Updated: February 2012)
- Bachelor of Science: Software Engineering (Updated June 2017)
- Bachelor of Science: Cybersecurity (Updated September 5, 2017)

Criminal Justice: Degree Maps

- Bachelor of Arts: Criminal Justice (Updated: 4/6/2018)

Economics: Degree Maps

- Bachelor of Arts: Economics (Updated: 1/24/2018)
- Bachelor of Arts: Business Economics (Updated: 1/24/2018)
- Bachelor of Science: Mathematical Economics (Updated: 10/14/13)
- Bachelor of Science: Social Studies - Economics Emphasis (Updated: November 2012)
- Bachelor of Arts/Master of Science Applied Economics (Updated 7/27/16)
- Master of Science Applied Economics (Updated 7/27/16)

Electrical & Computer Engineering: Degree Maps

- Bachelor of Science: Computer Engineering (Updated 5/4/2017)
- Bachelor of Science: Electrical Engineering (Updated 5/4/2017)

English: Degree Maps

- Bachelor of Arts: Creative Writing (Updated: September 2014)
- Bachelor of Arts: English (Updated: September 2014)
- Bachelor of Arts: Linguistics (Updated: September 2014)
- Bachelor of Arts: Literature (Updated: September 2014)
- Bachelor of Arts: Rhetorical and Applied Writing
- Bachelor of Science: Communication Arts and Literature (Updated October 2015)

Environmental and Technological Studies: Degree Maps

- Bachelor of Science: Environmental Science (Updated: 3/15/17)
- Bachelor of Science: Environmental Studies (Updated: 3/15/17)

- Bachelor of Science: Technology Education (Updated: 11/16/12)
- Bachelor of Science: Manufacturing Engineering Technology (Updated: 4/17)
- Bachelor of Science: Technology Management
    - Construction Management Emphasis (Updated: 11/16/12)
    - Industrial Technology Emphasis (Updated: 11/16/12)

Ethnic, Gender and Women's Studies: Degree Maps

- Bachelor of Arts, Bachelor of Science and Bachelor of Elective Studies - Gender and Women's Studies (Updated: 2/18)

Finance, Insurance & Real Estate: Degree Maps

- Bachelor of Science: Finance (Updated: 9/14/2018)
- Bachelor of Science: Real Estate (Updated: 9/14/2018)

Geography & Planning: Degree Maps

- Bachelor of Arts: Geography (Updated: 1/23/18)
- Bachelor of Arts: Geography with a GIS Minor (Updated: 1/23/18)
- Bachelor of Arts: Hospitality and Tourism (Updated: 10/2018)
- Bachelor of Arts: Planning and Community Development (Updated: 2/18)
- Bachelor of Arts: Travel and Tourism (Updated: 11/15/12)
- Bachelor of Science: Land Surveying and Mapping Sciences (Updated: 11/16/12)
- Bachelor of Science: Land Surveying and Mapping Sciences / GIS Minor (Updated: 11/15/12)
- Bachelor of Science: Social Studies Education - Geography Emphasis (Updated: 5/2018)

Gerontology: Degree Map

- Gerontology Minor (Updated: 6/24/15)

History: Degree Maps

- Bachelor of Arts: History (Updated: August 2014)
- Bachelor of Science: Social Studies: History Emphasis (Updated: 4/6/18)

Information Systems: Degree Maps

- Bachelor of Science: Information Systems (Updated: 9/14/2018)
- Bachelor of Science/Master of Science: Information Systems/Information Assurance (Updated 9/11/14)

Kinesiology: Degree Maps

- Bachelor of Science: Athletic Training (Updated: January 2015)
- Bachelor of Science: Community Health (Updated: August 2018)
- Bachelor of Science: Health/Physical Education (Updated: October 2017)
- Bachelor of Science: Physical Education (teaching) (Updated: July 2009)
- Bachelor of Science: Recreation and Sports Management (Updated: May 2015)

Languages & Cultures: Degree Maps

- Bachelor of Arts: French (Updated: 12/8/2015)
- Bachelor of Arts: German (Updated: 12/8/2015)
- Bachelor of Arts: Spanish (Updated: 12/8/2015)
- Bachelor of Arts Minor: French (Updated: 12/8/2015)
- Bachelor of Arts Minor: German (Updated: 12/8/2015)
- Bachelor of Arts Minor: Spanish (Updated: 12/8/2015)
- Bachelor of Science: French (K-12) (Updated: 12/8/2015)
- Bachelor of Science: German (K-12) (Updated: 12/8/2015)

- Bachelor of Science: Spanish (K-12) (Updated: 12/8/2015)

Management: Degree Maps

- Bachelor of Science: Management (Updated: 9/14/2018)
- Bachelor of Science: Management: Human Resources (Updated: 9/14/2018)
- Bachelor of Science: Management: Operations Management (Updated: 9/14/2018)
- Bachelor of Science: Entrepreneurship (Updated: 9/14/2018)
- Bachelor of Science: Management: Global Business (Updated 9/14/2018)

Marketing: Degree Maps

- Bachelor of Science: Marketing (Updated: 9/14/2018)
- Bachelor of Science: General Business (Updated: 9/14/2018)

Mass Communications: Degree Maps

- Bachelor of Science: Advertising (Updated 3/2017)
- Bachelor of Science: Broadcasting: Radio Emphasis (Updated 3/2017)
- Bachelor of Science: Broadcasting: Television Journalism (Updated 3/2017)
- Bachelor of Science: Broadcasting: Television Production (Updated 3/2017)
- Bachelor of Science: News Editorial: Photojournalism (Updated 3/2017)
- Bachelor of Science: News Editorial: Print Journalism (Updated 3/2017)
- Bachelor of Science: Public Relations (Updated 3/2017)

Mathematics & Statistics: Degree Maps

- Bachelor of Arts: Mathematics (Updated: 11/11/2015)
- Bachelor of Science: Mathematics (teaching) (Updated: 10/6/2017)
- Bachelor of Science: Statistics: Mathematical Statistics (Updated: 12/29/2016)
- Bachelor of Science: Data Analytics Concentration (Updated: 12/29/2016)
- Bachelor of Science: Data Science Concentration (Updated: 12/29/2016)

Mechanical & Manufacturing Engineering: Degree Maps

- Bachelor of Science: Manufacturing Engineering (Updated; 10/30/2018)
- Bachelor of Science: Mechanical Engineering (Updated: 10/30/2018)
- Bachelor of Science: Dual Major Program in ME and MfgE (Updated: 10/30/2018)

Medical Laboratory Science Degree Maps

- Bachelor of Science: Medical Laboratory Science - MLT to MLS/2+2 Program (Updated: 5/3/18)

Music: Degree Maps

- Bachelor of Arts: Composition and New Media Concentration (Updated 9/25/15)
- Bachelor of Arts: Composition Concentration (Updated 9/25/15)
- Bachelor of Arts: Music (Updated 9/25/15)
- Bachelor of Music: Instrumental Performance (Updated 9/28/15)
- Bachelor of Music: Piano Performance (Updated 9/28/15)
- Bachelor of Music: Vocal Performance (Updated 9/28/15)
- Bachelor of Science: Vocal and General Music Concentration (Updated 9/25/15)
- Bachelor of Science: Instrumental and General Music Concentration (Updated 9/25/15)
- Music Minor(Updated 9/28/15)
- Music Minor: New Media - Music and Art(Updated 9/28/15)

Nuclear Medicine Technology: Degree Map

- Bachelor of Science: Nuclear Medicine Technology (Updated: 10/4/18)

Nursing Science: Degree Maps

- Bachelor of Science: Nursing (Updated: 4/5/18)
- Bachelor of Science: Nursing RN to BS Completion (Updated 8/30/18)

Philosophy: Degree Maps

- Bachelor of Arts: Philosophy (Updated: July 2014)

Physics and Astronomy: Degree Maps

- Bachelor of Science: ACS Chemical Physics(Updated May 2012)
- Bachelor of Science: Astrophysics Track (Updated: 4/17/2012)
- Bachelor of Science: Electro-optics Physics Track (Updated 4/17/2012)
- Bachelor of Science: Engineering Science Track (Updated 4/17/2012)
- Bachelor of Science: Mathematics Physis Track (Updated 4/17/2012)
- Bachelor of Science: Physics
- Bachelor of Science: Physics Emphasis, Grades 5-12 (Updated 5/6/2019)
- Bachelor of Science: Physics Emphasis, Grades 9-12 (Updated 5/6/2019)
- Bachelor of Science: Professional Physics Track (Updated 4/17/2012)
- Bachelor of Science: Self Selection Track(Updated: 4/17/2012)
- Bachelor of Elective Studies: Physics

Political Science: Degree Maps

- Bachelor of Arts: International Relations (Updated: April 2012)
- Bachelor of Arts: Political Science (Updated; April 2012)
- Bachelor of Science: Social Studies: Political Science Emphasis (teaching) (Updated: November 2012)

Psychology: Degree Maps

- Bachelor of Arts: Psychology - Students who entered SCSU with 15 or fewer credits (Updated: 9/22/14)
- Bachelor of Arts: Psychology - Transfer Students with 16 or more credits (Updated: 2/12/16)
- Bachelor of Arts: Double Major Art and Psychology (Updated 9/22/14)

Radiologic Technology: Degree Map

- Bachelor of Science: Radiologic Technology (Updated: 8/9/18)

Social Work: Degree Maps

- Bachelor of Science: Social Work (Updated 3/4/19)

Sociology Degree Maps

- Bachelor of Arts: Sociology - Concentration in Critical Applied Sociology (Updated 6/26/18)
- Bachelor of Arts: Sociology (Updated 6/26/18)
- Bachelor of Science: Social Studies: Sociology Emphasis (teaching) (Updated: November 2012)

Special Education: Degree Maps

- Bachelor of Science: Special Education (Updated 9/21/2016)

Teacher Development: Degree Maps

- Bachelor of Science: Elementary/K-6 Licensure (Updated: 4/30/18)
- Bachelor of Science: Secondary Education Licensure (Updated 10/26/18)

Theatre & Film Studies

- Bachelor of Arts: Film Studies (Updated: April 22, 2013)
- Bachelor of Arts: Theatre (Updated: March 5, 2019)

Liberal Education Program

MISSION: The Liberal Education Program (LEP) at St. Cloud State University is committed to the ideal

of liberal education that provides knowledge, skills, and experiences and promotes critical thinking and ethical values for a lifetime of integrative learning in a diverse and changing society.

The Liberal Education Curriculum is organized into ten goals. To complete the curriculum, students must achieve the ten goals through courses or experiences and earn at least 40 credits in liberal education courses. Some goals may be satisfied by experiences other than courses (e.g., approved internship, study abroad, completion of major, or sequence of courses). Some courses may achieve two goals, and experiences may not be credit bearing, so students may complete the goals with fewer than 40 credits. Those students must complete additional liberal education courses to earn the required 40 credits. Liberal Education courses may be double counted as courses required for a major or minor. Courses used in the major may be designated as Liberal Education.

Each student must complete three courses designated as Diversity courses. Students may take no more than one course from any one department. It is strongly recommended and encouraged that one Diversity course be an approved Racial Issues (RIS) course. See Goal 7 for approved Racial Issues courses.

Minnesota Transfer Curriculum

Minnesota Transfer Curriculum (MnTC). The Liberal Education Program incorporates the ten goals of the Minnesota Transfer Curriculum. This curriculum provides for transfer of liberal education courses to and from all Minnesota State Colleges and Universities. The University of Minnesota recognizes completion of the entire MnTC for transfer. St. Cloud State University recognizes in transfer from other institutions completion of the entire MnTC, completion of individual goals in the MnTC, and completion of individual courses designated for MnTC goals. Only courses completed at the 100 level and above will count as completing a Liberal Education goal area.

- Students must complete all ten goals and achieve a total of at least 40 credits.
- Number superscripts above the course indicate another goal to which the course may be applied.
- Each student must complete three courses designated as Diversity courses. Students may take no more than one course from any one department.
- It is strongly recommended and encouraged that one Diversity course be an approved Racial Issues (RIS) course. See Goal 7 for approved Racial Issues courses.
- See the University Catalog under University Honors Program for Honors courses which fulfill the goals.
- A student is eligible for admission as a transfer student if he/she has earned twelve (12) or more college-level credits at a regionally accredited university or college-level institution. All credits earned with a grade of "C" or higher from a regionally accredited university or college-level institution are considered for credit transfer. Minnesota Transfer Curriculum (MnTC) courses with grades of "A"-"D" transfer; however, a cumulative MnTC grade point average (GPA) of 2.0 is required.
- **Effective Date:** February 6, 2014

Goal 1: Communication

Goal 1: Communication (2 courses)

Select one of the following:
ART 198: Research and Analytical Writing in Art, 4 Cr.
ENGL 190: Introduction to Rhetorical and Analytical Writing: Supplemental, 4 Cr.
ENGL 191: Introduction to Rhetorical and Analytical Writing, 4 Cr.
ENGL 198: Analytical and Research Writing in the Humanities, 4 Cr.
ENGL 291: Introduction to Analytical and Rhetorical Writing (ENGL 291 should be taken only in consultation with an advisor), 2 Cr.
TH 198: Rhetorical and Analytical Writing for Theatre, 4 Cr.

Students are also required to complete:
CMST 192: Introduction to Communication Studies, 3 Cr.

Goal 2: Critical Thinking

Goal 2: Critical Thinking (1 course)

ASTR 107[3], Concepts of Stars and the Universe, 3 Cr.
CMST 306[6]: Rhetoric in Popular Culture, 3 Cr.
CMST 318: Argumentation and Advocacy, 3 Cr.

ENGL 306[6]: Rhetoric in Popular Culture, 3 Cr.
HLTH 250: Consumer Health, 3 Cr.
LIB 280: Critical Thinking in Academic Research, 3 Cr.
PHIL 194: Critical Reasoning, 3 Cr.
POL 191: Introduction to Political and Legal Reasoning, 3 Cr.
POL 192: Critical Reasoning: Issues and Events in American Politics, 3 Cr.

Goal 3: Natural Sciences

Goal 3: Natural Sciences (Minimum of two courses, no more than 4 credits from one rubric or academic area. Include one laboratory course, indicated with *)

AHS 104*: Introduction to Atmospheric Science, 3 Cr.
AHS 105*: The Water Environment, 3 Cr.
AHS 106[10]: Natural Hazards and Human Society, 3 Cr.
AHS 109*: Introduction to Environmental Geology, 3 Cr.
AHS 220*: Physical Geology Systems, 4 Cr.
AHS 230*: Introduction to Physical Hydrology, 4 Cr.
AHS 260*: Introductory Meteorology, 4 Cr.
ANTH 140: Human Origins (Diversity), 3 Cr.
ASTR 105: Astrobiology, 3 Cr.
ASTR 106*: Concepts of the Solar System, 3 Cr.
ASTR 107[2]: Concepts of Stars and the Universe, 3 Cr.
ASTR 120*[8]: Archaeoastronomy (Diversity), 3 Cr.
ASTR 205*: General Astronomy, 4 Cr.
BIOL 101*[10]: Environment and Society, 3 Cr.
BIOL 102*[10]: The Living World, 3 Cr.
BIOL 103*: Human Biology, 3 Cr.
BIOL 104*: Human Disorders (Topical), 3 Cr.
BIOL 106: Cultural Botany (Diversity), 3 Cr.
BIOL 107*: Biology of Women (Diversity), 3 Cr.
BIOL 152*[10]: Organismal Diversity, 4 Cr.
CHEM 101: Understanding Chemistry, 3 Cr.
CHEM 105[10]: Chemistry and the Environment, 3 Cr.
CHEM 151*: General, Organic, and Biological Chemistry, 5 Cr.
CHEM 160*: Preparatory Chemistry, 4 Cr.
CHEM 207*: Forensic Science, 3 Cr.
CHEM 210*: General Chemistry 1, 4 Cr.
CHEM 211*: General Chemistry 2, 4 Cr.
CHEM 307*: Advanced Forensic Science, 3 Cr.
GEOG 272*: Physical Geography, 3 Cr.
HLTH 210: Principles of Nutrition, 3 Cr.
PHYS 101: Famous People of Science, 3 Cr.
PHYS 103*: Concepts in Physics, 3 Cr.
PHYS 208[10]: Energy and Environment, 3 Cr.
PHYS 231*: General Physics I, 4 Cr.
PHYS 232*: General Physics II, 4 Cr.
PHYS 234*: Classical Physics I, 5 Cr.
PHYS 235*: Classical Physics II, 5 Cr.

Goal 4: Mathematical/Logical Reasoning

Goal 4: Mathematical/Logical Reasoning (1 course)

CSCI 200, Elements of Computing, 3 Cr.
ECON 110, Personal Finance, 3 Cr.
MATH 112, College Algebra, 3 Cr.
MATH 113, Trigonometry, 3 Cr.
MATH 115, Precalculus, 5 Cr.
MATH 193, Mathematical Thinking, 3 Cr.
MATH 196, Finite Mathematics, 3 Cr.
MATH 201, Elements of Mathematics I, 3 Cr.
MATH 211, Survey of Calculus I, 3 Cr.
MATH 221, Calculus I, 4 Cr.
MATH 222, Calculus II, 4 Cr.
PHIL 223, Elementary Symbolic Logic, 3 Cr.
STAT 193, Statistical Thinking, 3 Cr.
STAT 219, Statistics for the Social Sciences, 3 Cr.
STAT 239, Statistics for the Biological and Physical Sciences, 3 Cr.

Goal 5: History and the Social and Behavioral Sciences

Goal 5: History and the Social and Behavioral Sciences (2 courses with no more than 4 credits from one rubric or academic area)

AFST 2508, Introduction to African Studies (Diversity), 3 Cr.
ANTH 1018, Introduction to Anthropology (Diversity), 3 Cr.
ANTH 130, Introduction to Prehistoric Cultures (Diversity), 3 Cr.
ANTH 188, Indians of the Americas (Diversity), 3 Cr.
ANTH 198, The Anthropology of Modern American Life, 3 Cr.
ANTH 250[8], Introductory Cultural Anthropology (Diversity), 3 Cr.
ART 2316, Art History Survey II, 3 Cr.
BRIT 250, Contemporary Britain, 3 Cr.
CFS 220, Introduction to Parents and Children, 3 Cr.
CJS 100, History of Criminal Justice, 3 Cr.CJS 101, Survey of Criminal Justice, 3 Cr.CJS 111, Crime and Justice in America (Diversity), 3 Cr.
CMTY 2008, Cities, Suburbs, and Small Towns, 3 Cr.
CMTY 222, Diversity in the American Experience (Diversity), 3 Cr.
CMTY 394, Urban Planning (Same as GEOG 394), 3 Cr.
CMST 220, Interpersonal Communication, 3 Cr.

COLL 196, First Year Seminar, 3 Cr.
CPSY 101, Applying Psychology [Same as CEEP 101], 3 Cr.
CPSY 262, Human Growth and Development, 3 Cr.
CSD 130[7], Introduction to Human Communication Disorders, 3 Cr.
EAST 2508, Introduction to East Asia (Diversity), 3 Cr.
ECON 197, Economics for Everyday Life, 3 Cr.
ECON 201, Introduction to Economics, 3 Cr.
ECON 205, Principles of Macroeconomics, 3 Cr.
Principles of Microeconomics, 3 Cr.
ECON 381, Economics of Crime and Justice, 3 Cr.
ETHS 312, American Indian Women's Lives, 3 Cr.
ETHS 335, Asian Pacific American Women (Diversity), 3 Cr.
ETHS 3456, Asian Pacific Americans in Popular Culture (Diversity), 3 Cr.
ETHS 410, Contemporary American Indian Issues, 3 Cr.
ETHS 425, Contemporary Asian Pacific American Issues (Diversity), 3 Cr.
ETS 1828, Modern Technology and Civilization, 3 Cr.
ETS 1838, Technology and Third World Development (Diversity), 3 Cr.
ETS 37510, Society and the Environment, 3 Cr.
GEOG 271, Economic Geography, 3 Cr.
GEOG 394, Urban Planning (Same as CMTY 394), 3 Cr.
GERO 208, Introduction to Gerontology (Diversity), 3 Cr.
GERO 405, Aging and Diversity (Diversity), 3 Cr.
GERO 415, Women and Aging (Diversity), 3 Cr.
GWS 201, Introduction to Women's Studies (Diversity), 3 Cr.
HLTH 215, Personal and Community Health, 3 Cr.
HIST 101[8], Studies in World History, 3 Cr.
HIST 106[8], Historical Studies (Diversity), 3 Cr.
HIST 109[7], Race in America (Diversity/RIS), 3 Cr.
HIST 140, America to 1865, 3 Cr.
HIST 141, United States Since 1865, 3 Cr.
HIST 150[8], Twentieth Century World (Diversity), 3 Cr.
HIST 195[9], Democratic Citizenship, 3 Cr.
HIST 210[8], Western Civilization I: Antiquity to 1500, 3 Cr.
HIST 211[8], Western Civilization II: 1500-Present, 3 Cr.
HIST 352[7], American Indian History (Diversity), 3 Cr.
HIST 358[7], Immigration, Race and Ethnicity (Diversity), 3 Cr.
LAST 250[8], Introduction to Latin America (Diversity), 3 Cr.
POL 111[9], American National Government, 3 Cr.
PSY 115, Introduction to Psychology, 3 Cr.
PSY 225, Psychology of Women (Diversity), 3 Cr.
PSY 228[10], Conservation Psychology, 3 Cr.
PSY 240, Developmental Psychology, 3 Cr.
SOC 111[9], Social Problems (Diversity), 3 Cr.
SOC 160, Principles of Sociology, 3 Cr.
SOC 200[10], Environmental Sociology (Diversity), 3 Cr.
SOC 211, Crime Myths and Media (Diversity), 3 Cr.
SOC 273[8], Sociology of Gender (Diversity), 3 Cr.
SOC 276[8], Families and Globalization, 3 Cr.
SPED 203, Exceptionalities and Human Diversity, 3 Cr.
TH 270[6], American Musical Theatre, 3 Cr.

Goal 6: Humanities and Fine Arts

Goal 6: Humanities and Fine Arts (2 courses with no more than 4 credits from one rubric or academic area)

ART 130, Studio Art for Non-Majors, 3 Cr.
ART 131[8], Introduction to the Visual Arts of the World (Diversity), 3 Cr.
ART 230[8], Art History Survey I, 3 Cr.
ART 231[5], Art History Survey II, 3 Cr.
ART 333, Art and Literature, 3 Cr.
ART 4338, Asian Art History (Diversity), 3 Cr.
ART 434[8], African Art History (Diversity), 3 Cr.
ART 435[8], Art History of the Americas (Diversity), 3 Cr.
ART 490[8], Folk, Ethnic, and Indigenous Art (Diversity), 3 Cr.
COLL 197, First Year Seminar, 3 Cr.
CMST 210, Performance and Everyday Life, 3 Cr.
CMST 211, Public Speaking, 3 Cr.
CMST 306[2], Rhetoric in Popular Culture, 3 Cr.
CMST 316, Speech Writing, 3 Cr.
CSD 171, American Sign Language, 3 Cr.
DANC 142, Dance for Everyone, 3 Cr.
DANC 341[8], Global Dance Perspectives (Diversity), 3 Cr.
ENGL 184, Introduction to Literature, 3 Cr.
ENGL 201, Classics of Literature, 3 Cr.
ENGL 202, Myth, Legend, and Sacred Literatures, 3 Cr.
ENGL 203, Gender Issues in Literature (Diversity), 3 Cr.
ENGL 215, American Indian Literature (Diversity), 3 Cr.
ENGL 216[7], African American Literature (Diversity/RIS), 3 Cr.
ENGL 280, Understanding Video Games, 3 Cr.
ENGL 305, Lesbian, Gay, Bisexual, Transgender Literature (Diversity), 4 Cr.
ENGL 306[2], Rhetoric in Popular Culture, 3 Cr.

ETHS 301, Special Topics in American Indian Studies, 3 Cr.
ETHS 307, Chicano/a Cultural Expressions, 3 Cr.
ETHS 345[5], Asian Pacific Americans in Popular Culture (Diversity), 3 Cr.
FREN 101[8], Elementary French I, 4 Cr.
FREN 102[8], Elementary French II, 4 Cr.
FREN 110[8],Introduction to French Culture, 3 Cr.
FREN 201[8], Intermediate French I, 4 Cr.
FREN 202[8], Intermediate French II, 4 Cr.
FS 175, Film and Culture, 3 Cr.
FS 260, The Art of Film, 3 Cr.
FS 270, Digital Filmmaking, 4 Cr.
GEOG 270, Introduction to Cultural Geography (Diversity), 3 Cr.
GER 101[8], Elementary German I, 4 Cr.
GER 102[8], Elementary German II, 4 Cr.
GER 110[8], Introduction to German Culture, 3 Cr.
GER 201[8], Intermediate German I, 4 Cr.
GER 202[8], Intermediate German II, 4 Cr.
GWS 330, Gender and Popular Culture, 3 Cr.
HUMS 250, Introduction to the Humanities, 3 Cr.
IM 260, Exploring Digital Media, 3 Cr.
JPN 101[8], Elementary Japanese I (Diversity), 4 Cr.
JPN 102[8], Elementary Japanese II (Diversity), 4 Cr.
JPN 201[8], Intermediate Japanese I, 4 Cr.
JPN 202[8], Intermediate Japanese II, 4 Cr.
LC 101[8], Elementary Foreign Language I (Topical), 4 Cr.
LC 102[8], Elementary Foreign Language II (Topical), 4 Cr.
LC 201[8], Intermediate Foreign Languages I (Topical), 4 Cr.
LC 202[8], Intermediate Foreign Languages II (Topical), 4 Cr.
MCOM 146, American Television and Cultural Diversity (Diversity), 3 Cr.
MCOM 200, Introduction to Mass Communications, 3 Cr.
MCOM 275, Documentaries of the Holocaust (Diversity), 3 Cr.
MUSM 100, Introduction to Musical Concepts, 3 Cr.
MUSM 123, Experiencing Live Music, 3 Cr.
MUSM 125[8], Music in World Culture (Diversity), 3 Cr.
MUSM 126, History of Rock and Roll Music, 3 Cr.
MUSM 229, Jazz History, 3 Cr.
MUSP 110-448, Private Lessons, 1-3 Cr.
MUSP 159[8], World Drumming Group, 1 Cr.
MUSP 155-367, Ensembles, 1 Cr.
MUSP 358, Chamber Singers, 1 Cr.
PHIL 111[8], Multicultural Philosophy (Diversity), 3 Cr.
PHIL 112, Philosophical Explorations, 3 Cr.
PHIL 116, Elementary Topics in Philosophy, 1-3 Cr.
PHIL 211[8], Philosophy and Feminism (Diversity), 3 Cr.
PHIL 212[9], Moral Problems and Theories, 3 Cr.
PHIL 221, Philosophy of Religion, 3 Cr.
PHIL 222, Existentialism, 3 Cr.
PHIL 251, History of Western Philosophy I, 3 Cr.
PHIL 252, History of Western Philosophy II, 3 Cr.
REL 100[8], World Religions (Diversity), 3 Cr.
REL 150, Introduction to the Old Testament/Hebrew Bible, 3 Cr.
RUSS 101[8], Elementary Russian I, 4 Cr.
RUSS 102[8], Elementary Russian II, 4 Cr.
RUSS 110[8],Introduction to Russian Culture, 3 Cr.
RUSS 201[8], Intermediate Russian I, 4 Cr.
RUSS 202[8], Intermediate Russian II, 4 Cr.
SPAN 101[8], Elementary Spanish I, 4 Cr.
SPAN 102[8], Elementary Spanish II, 4 Cr.
SPAN 103[8],, Accelerated Spanish for High Beginners, 4 Cr.
SPAN 110[8], Introduction to Spanish Speaking Cultures, 3 Cr.
SPAN 201[8], Intermediate Spanish I, 4 Cr.
SPAN 202[8], Intermediate Spanish II, 4 Cr.
TH 148, Acting for Everyone, 3 Cr.
TH 231, Introduction to Theatre, 3 Cr.
TH 242, Active Collaboration, 3 Cr.
TH 258, Practical Creativity, 3 Cr.
TH 270[5], American Musical Theatre, 3 Cr.

Goal 7: Human Diversity

Goal 7: Human Diversity (1 course)

CMTY 2225, Diversity in the American Experience (Diversity/RIS), 3 Cr.
CSD 1305, Introduction to Human Communication Disorders (Diversity), 3 Cr.
ENGL 2166, African American Literature (Diversity/RIS), 3 Cr.
ETHS 111, Race in America (Diversity/RIS), 3 Cr.
ETHS 201, Introduction to Ethnic Studies (Diversity/RIS), 3 Cr.
ETHS 205, Introduction to Chicano/a Studies (Diversity/RIS), 3 Cr.
ETHS 210, Introduction to American Indian Studies (Diversity/RIS), 3 Cr.
ETHS 215, Introduction to Asian American Studies (Diversity/RIS), 3 Cr.
ETHS 220, Introduction to African American Studies (Diversity/RIS), 3 Cr.
ETHS 308, African American Cultural Expressions (Diversity), 3 Cr.
ETHS 310, American Indians in the Social Science Curriculum (Diversity/RIS), 3 Cr.

ETHS 408, Major Works in African American Studies (Diversity), 3 Cr.
ETHS 470, The Black Community (Diversity/RIS), 3 Cr.
GWS 220, Race and Gender in the U.S. (Diversity/RIS), 3 Cr.
HIST 1095, Race in America (Diversity/RIS), 3 Cr.
HIST 1415, United States Since 1864 (Diversity), 3 Cr.
HIST 3525, American Indian History (Diversity), 3 Cr.
HIST 3585, Immigration, Race and Ethnicity (Diversity), 3 Cr.
HIST 420, Colonial North America (Diversity), 3 Cr.
HURL 102, Human Relations and Race (Diversity/RIS), 3 Cr.
JWST 180, Anti-Semitism in America (Diversity), 3 Cr.
POL 310, U.S. Politics of Race, Ethnicity, and Immigration (Diversity/RIS), 3 Cr.
REL 180, Religion: Race and Racism (Diversity), 3 Cr.
SOC 268, Race and Ethnicity (Diversity/RIS), 3 Cr.

Goal 8: Global Perspective

Goal 8: Global Perspective (1 course)

AFST 250[5], Introduction to African Studies (Diversity), 3 Cr.
ANTH 101[5], Introduction to Anthropology (Diversity), 3 Cr.
ANTH 250[5], Introductory Cultural Anthropology (Diversity), 3 Cr.
ART 131[6], Introduction to the Visual Arts of the World (Diversity), 3 Cr.
ART 230[6], Art History Survey I, 3 Cr.
ART 433[6], Asian Art History (Diversity), 3 Cr.
ART 434[6], African Art History (Diversity), 3 Cr.
ART 435[6], Art History of the Americas (Diversity), 3 Cr.
ART 490[6], Folk, Ethnic, and Indigenous Art (Diversity), 3 Cr.
ASTR 120[3], Archaeoastronomy (Diversity), 3 Cr.
BLAW 230, Consumer and Personal Law, 3 Cr.
BRIT 101, Introduction to the British Cultural Experience, 1 Cr.
BRIT 201, Reflections on the British Cultural Experience, 2 Cr.
CFS 260, Children in a Changing World (Diversity), 3 Cr.
CMST 330, Intercultural Communication (Diversity), 3 Cr.
CMTY 200[5], Cities, Suburbs, and Small Towns, 3 Cr.
CSD 230, Global Perspectives on Communication Disorders (Diversity), 3 Cr.
DANC 341[6], Global Dance Perspectives (Diversity), 3 Cr.
EAST 250[5], Introduction to East Asia (Diversity), 3 Cr.
ECON 350, Economics of Developing Countries (Diversity), 3 Cr.
ENTR 200, Principles of Entrepreneurship, 3 Cr.
ETS 182[5], Modern Technology and Civilization, 3 Cr.
ETS 183[5], Technology and Third World Development (Diversity), 3 Cr.
ETS 185[10], Energy Resources and Issues, 3 Cr.
FREN 101[6], Elementary French I, 4 Cr.
FREN 102[6], Elementary French II, 4 Cr.
FREN 110[6], Introduction to French Culture, 3 Cr.
FREN 201[6], Intermediate French I, 4 Cr.
FREN 202[6], Intermediate French II, 4 Cr.
GEOG 111, Introduction to Global Geography (Diversity), 3 Cr.
GER 101[6], Elementary German I, 4 Cr.
GER 102[6], Elementary German II, 4 Cr.
GER 110[6], Introduction to German Culture, 3 Cr.
GER 201[6], Intermediate German I, 4 Cr.
GER 202[6], Intermediate German II, 4 Cr.
GERO 470[5], Global Aging (Diversity), 3 Cr.
GLST 195[9], Global Society and Citizenship, 3 Cr.
GWS 340, Global Feminisms, 3 Cr.,
HIST 101[5], Studies in World History, 3 Cr.
HIST 106[5], Historical Studies (Diversity), 3 Cr.
HIST 110[5], Western Civilization I: Antiquity to 1500, 3 Cr.
HIST 111[5], Western Civilization II: 1500-Present, 3 Cr.
HIST 150[5] , Twentieth Century World (Diversity), 3 Cr.
HTSM 111, Introduction to Hospitality and Tourism, 3 Cr.
HTSM 215, Geography of Tourism, 3 Cr.
HURL 303[10], Global Social and Environmental Justice, 3 Cr.
IM 204, Research Strategies in a Changing World (Diversity), 3 Cr.
JPN 101[6], Elementary Japanese I (Diversity), 4 Cr.
JPN 102[6], Elementary Japanese II (Diversity), 4 Cr.
JPN 201[6], Intermediate Japanese I, 4 Cr.
JPN 202[6], Intermediate Japanese II, 4 Cr.
LAST 250[5], Introduction to Latin America (Diversity), 3 Cr.
LC 101[6], Elementary Foreign Language I (Topical), 4 Cr.
LC 102[6], Elementary Foreign Language II (Topical), 4 Cr.
LC 201[6], Intermediate Foreign Languages I (Topical), 4 Cr.
LC 202[6], Intermediate Foreign Languages II (Topical), 4 Cr.
LIB 290, Social Media in a Global Context (Diversity), 3 Cr.
MGMT 260, Principles of International Business, 3

Cr.
MKTG 100, Contemporary Business Concepts, 3 Cr.
MUSM 125[6], Music in World Culture (Diversity), 3 Cr.
MUSP 159[6], World Drumming Group, 1 Cr.
PHIL 111[6], Multicultural Philosophy (Diversity), 3 Cr.
PHIL 211[6], Philosophy and Feminism (Diversity), 3 Cr.
PHIL 327[9], Global Justice, 3 Cr.
PHIL 484[9], Global Business Ethics, 3 Cr.
POL 101, Political Ideas and Institutions, 3 Cr.
POL 251, Introduction to World Politics, 3 Cr.
POL 333, Latin American Government and Politics, 3 Cr.
POL 334, Middle East Government and Politics, 3 Cr.
POL 335, African Government and Politics (Diversity), 3 Cr.
POL 337, Emerging Political Issues in the Nonwestern World (Diversity), 3 Cr.
POL 434, Politics of the Arab Peninsula (Diversity), 3 Cr.
POL 436, Southeast Asian Governments and Politics (Diversity), 3 Cr.
REL 100[6], World Religions (Diversity), 3 Cr.
REL 225, Asian Religions (Diversity), 3 Cr.
RUSS 101[6], Elementary Russian I, 4 Cr.
RUSS 102[6], Elementary Russian II, 4 Cr.
RUSS 110[6], Introduction to Russian Culture, 3 Cr.
RUSS 201[6], Intermediate Russian I, 4 Cr.
RUSS 202[6], Intermediate Russian II, 4 Cr.
SOC 273[5], Sociology of Gender (Diversity), 3 Cr.
SOC 276[5], Families and Globalization (Diversity), 3 Cr.
SPAN 100, Spanish for Health Care Professionals, 3 Cr.
SPAN 101[6], Elementary Spanish I, 4 Cr.
SPAN 102[6], Elementary Spanish II, 4 Cr.
SPAN 103[6], Accelerated Spanish for High Beginners, 4 Cr.
SPAN 110[6], Introduction to Spanish Speaking Cultures, 3 Cr.
SPAN 201[6], Intermediate Spanish I, 4 Cr.
SPAN 202[6], Intermediate Spanish II, 4 Cr.

Goal 9: Ethical and Civic Responsibility

Goal 9: Ethical and Civic Responsibility (1 course)

BLAW 235, The Legal, Ethical, and Global Environment of Business, 3 Cr.
CMTY 195, Community and Democratic Citizenship, 3 Cr.
ECE 101, Introduction to the Engineering Profession (Same as GENG 101), 3 Cr.
ECON 195, Economics and Democratic Citizenship, 3 Cr.
GENG 101, Ethics and the Engineering Profession (Same as ECE 101), 3 Cr.
GLST 195[8], Global Society and Citizenship, 3 Cr.
HIST 195[5], Democratic Citizenship, 3 Cr.
HURL 201, Non-Oppressive Relationships I (Diversity), 3 Cr.
LC 445, Service Learning Experience, 2-4 Cr.
PHIL 212[6], Moral Problems and Theories, 3 Cr.
PHIL 213[10], Environmental Ethics, 3 Cr.
PHIL 327[8], Global Justice, 3 Cr.
PHIL 328, Bioethics (Diversity), 3 Cr.
PHIL 484[8], Global Business Ethics, 3 Cr.
POL 111[5], American National Government, 3 Cr.
POL 320, Women in Politics (Diversity), 3 Cr.
REL 201, Religious Pluralism, 3 Cr.
SOC 111[5], Social Problems (Diversity), 3 Cr.
SW 195, Social Welfare and Democratic Citizenship, 3 Cr.

Goal 10: People and the Environment

Goal 10: People and the Environment (Minimum 1 course)

AHS 106[3], Natural Hazards and Human Society, 3 Cr.
ANTH 252, Human Ecology, 3 Cr.
BIOL 101*[3], Environment and Society, 3 Cr.
BIOL 102*[3], The Living World, 3 Cr.
BIOL 152*[3], Organismal Diversity, 4 Cr.
CHEM 105[3], Chemistry and the Environment, 3 Cr.
ENVE 201, Introduction to Environmental Engineering, 3 Cr.
ETS 185[8], Energy Resources and Issues, 3 Cr.
ETS 260, Introduction to Environmental Studies, 3 Cr.
ETS 363, Resource Management, 3 Cr.
ETS 375[5], Society and the Environment, 3 Cr.
GEOG 106, People and the Planet, 3 Cr.
GEOG 372, Conservation of World Resources, 3 Cr.
HLTH 482, Environmental Health, 3 Cr.
HURL 303[8], Global Social and Environmental Justice, 3 Cr.
PHIL 213[9], Environmental Ethics, 3 Cr.
PHYS 208[3], Energy and Environment, 3 Cr.
POL 453, Global Environmental Politics and Policies, 3 Cr.
PSY 228[5], Conservation Psychology, 3 Cr.
SOC 200[5], Environmental Sociology (Diversity), 3 Cr.

Transfer Students

SCSU also accepts the completed Minnesota Transfer Curriculum (MnTC) as fulfilling the SCSU Liberal Education Program, including Racial Issues.

Students with a partially completed MnTC are not required to repeat any goals they have already fulfilled at another Minnesota State College or University, and will be allowed to select from the course list above to complete the ten MnTC goals. Students are still responsible for Racial Issues.

Goal 1: Communication

Goal 1: Communication

Goal 1: Communication (2 courses)

Select one of the following:
ART 198: Research and Analytical Writing in Art, 4 Cr.
ENGL 190: Introduction to Rhetorical and Analytical Writing: Supplemental, 4 Cr.
ENGL 191: Introduction to Rhetorical and Analytical Writing, 4 Cr.
ENGL 198: Analytical and Research Writing in the Humanities, 4 Cr.
ENGL 291: Introduction to Analytical and Rhetorical Writing (ENGL 291 should be taken only in consultation with an advisor), 2 Cr.
TH 198: Rhetorical and Analytical Writing for Theatre, 4 Cr.

Students are also required to complete:
CMST 192: Introduction to Communication Studies, 3 Cr.

Goal 1: Communication

Goal: To develop writers and speakers who use the English language effectively and who read, write, speak, and listen critically. As a base, all students should complete introductory communication requirements early in their collegiate studies. Writing competency is an ongoing process to be reinforced through writing- intensive courses and writing across the curriculum. Speaking and listening skills need reinforcement through multiple opportunities for interpersonal communication, public speaking, and discussion.

LEP Objective: Develop, convey, and evaluate oral and written communication in various academic, professional and personal contexts. Use oral and written communication characterized by clarity, critical analysis, logic, coherence, precision, and rhetorical awareness. Students can meet this requirement through 1 approved course or experience in written communication and 1 approved course or experience in oral communication.

Students will be able to:

1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
2. Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

Consistent with LEP Student Learning Outcomes, students will also demonstrate their ability to:

- *Use writing and speaking processes (such as inventing, organizing, drafting, revising, editing, and presenting) as appropriate for specific tasks and audiences.*
- *Listen, think critically and creatively, reflect, and respond appropriately to group tasks, relationships, and processes.*
- *Locate, evaluate, and synthesize material from diverse sources (print and non-print) and multiple points of view, using them in a responsible and ethical manner.*
- *Evaluate communicative situations and use rhetorical tools appropriate for those situations.*
- *Construct logical and coherent arguments, recognizing the role and value of credibility (ethos), point of view, emotional appeals (pathos), and individual voice and style in writing and in speaking.*
- *Employ syntax, usage, and style appropriate to academic disciplines, for professional environments, and for personal expression and interpersonal exchange.*

- *Describe, summarize, and analyze written and spoken discourse, noting how language affects and reflects our perception of human values, cultural perspectives, and gender identities.*
- *Identify and use appropriate skills for diverse types and levels of listening and/or reading.*

Goal 2: Critical Thinking

Goal 2: Critical Thinking

Goal 2: Critical Thinking (1 course)

ASTR 107[3], Concepts of Stars and the Universe, 3 Cr.
CMST 306[6]: Rhetoric in Popular Culture, 3 Cr.
CMST 318: Argumentation and Advocacy, 3 Cr.
ENGL 306[6]: Rhetoric in Popular Culture, 3 Cr.
HLTH 250: Consumer Health, 3 Cr.
LIB 280: Critical Thinking in Academic Research, 3 Cr.
PHIL 194: Critical Reasoning, 3 Cr.
POL 191: Introduction to Political and Legal Reasoning, 3 Cr.
POL 192: Critical Reasoning: Issues and Events in American Politics, 3 Cr.

Goal 2: Critical Thinking

Goal: To develop thinkers who are able to unify factual, creative, rational, and value sensitive modes of thought. Critical thinking will be taught and used throughout the liberal education curriculum in order to develop students' awareness of their own thinking and problem-solving procedures. To integrate new skills into their customary ways of thinking, students must be actively engaged in practicing thinking skills and applying them to open-ended problems.

LEP Objective: Identify, analyze, and critically evaluate reasoning in a variety of domains in order to develop well founded beliefs and engage in rational and effective action. Students can meet this requirement through 1 approved course or experience.

Students will be able to:

1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems
3. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

Consistent with LEP Student Learning Outcomes, students will also demonstrate their ability to:

- *Distinguish between discourse that contains reasoning and that which does not.*
- *Distinguish between different types of reasoning.*
- *Analyze arguments, distinguishing premises and conclusions.*
- *Evaluate inductive and deductive reasoning.*
- *Apply basic logical techniques.*
- *Identify and avoid fallacies.*

Goal 3: Natural Sciences

Goal 3: Natural Sciences

Goal 3: Natural Sciences (Minimum of two courses, no more than 4 credits from one rubric or academic area. Include one laboratory course, indicated with *)

AHS 104*: Introduction to Atmospheric Science, 3 Cr.
AHS 105*: The Water Environment, 3 Cr.
AHS 106[10]: Natural Hazards and Human Society, 3 Cr.
AHS 109*: Introduction to Environmental Geology, 3 Cr.
AHS 220*: Physical Geology Systems, 4 Cr.
AHS 230*: Introduction to Physical Hydrology, 4 Cr.
AHS 260*: Introductory Meteorology, 4 Cr.
ANTH 140: Human Origins (Diversity), 3 Cr.
ASTR 105: Astrobiology, 3 Cr.
ASTR 106*: Concepts of the Solar System, 3 Cr.
ASTR 107[2]: Concepts of Stars and the Universe, 3 Cr.
ASTR 120*[8]: Archaeoastronomy (Diversity), 3 Cr.

ASTR 205*: General Astronomy, 4 Cr.
BIOL 101*[10]: Environment and Society, 3 Cr.
BIOL 102*[10]: The Living World, 3 Cr.
BIOL 103*: Human Biology, 3 Cr.
BIOL 104*: Human Disorders (Topical), 3 Cr.
BIOL 106: Cultural Botany (Diversity), 3 Cr.
BIOL 107*: Biology of Women (Diversity), 3 Cr.
BIOL 152*[10]: Organismal Diversity, 4 Cr.
CHEM 101: Understanding Chemistry, 3 Cr.
CHEM 105[10]: Chemistry and the Environment, 3 Cr.
CHEM 151*: General, Organic, and Biological Chemistry, 5 Cr.
CHEM 160*: Preparatory Chemistry, 4 Cr.
CHEM 207*: Forensic Science, 3 Cr.
CHEM 210*: General Chemistry 1, 4 Cr.
CHEM 211*: General Chemistry 2, 4 Cr.
CHEM 307*: Advanced Forensic Science, 3 Cr.
GEOG 272*: Physical Geography, 3 Cr.
HLTH 210: Principles of Nutrition, 3 Cr.
PHYS 101: Famous People of Science, 3 Cr.
PHYS 103*: Concepts in Physics, 3 Cr.
PHYS 208[10]: Energy and Environment, 3 Cr.
PHYS 231*: General Physics I, 4 Cr.
PHYS 232*: General Physics II, 4 Cr.
PHYS 234*: Classical Physics I, 5 Cr.
PHYS 235*: Classical Physics II, 5 Cr.

Goal 3: Natural Sciences

Goal: To improve students' understanding of natural science principles and of the methods of scientific inquiry, i.e, the ways in which scientists investigate natural science phenomena. As a basis for lifelong learning, students need to know the vocabulary of science and to realize that while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today's scientists, students learn to appreciate the importance of science in their lives and to understand the value of a scientific perspective. Students should be encouraged to study both the biological and physical sciences.

LEP Objective: Explore scientific knowledge of the natural world. Understand the central concepts and principles of science; experience the process of scientific inquiry; comprehend science as a human endeavor and understand the impact of science on individuals and on society. Students can meet this requirement through 2 approved courses or experiences in different rubrics or academic areas, at least one of these must be a laboratory course.

Students will be able to:

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students, laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

Consistent with LEP Student Learning Outcomes, students will also demonstrate their ability to:

- *Demonstrate knowledge of concepts, principles, and theories in the physical or natural sciences.*
- *Make observations and collect data, design and carry out experiments or other types of scientific investigations.*
- *Formulate research questions and testable hypotheses, analyze and interpret data, draw inferences and conclusions, and identify further questions for investigation.*
- *Demonstrate awareness of the interdependent relationships of basic science, applied science, mathematics, and technology.*
- *Recognize the human nature of the scientific enterprise, including the importance of curiosity, creativity, and imagination; the dual nature of scientific knowledge as changeable and durable; and the impact of a scientist's personal identity on the scientific process.*
- *Evaluate societal issues from a science perspective, question the evidence presented, and make informed judgments about these issues.*

Goal 4: Mathematical/Logical Reasoning

Goal 4: Mathematical/Logical Reasoning

Goal 4: Mathematical/Logical Reasoning (1 course)

CSCI 200, Elements of Computing, 3 Cr.
ECON 110, Personal Finance, 3 Cr.
MATH 112, College Algebra, 3 Cr.
MATH 113, Trigonometry, 3 Cr.
MATH 115, Precalculus, 5 Cr.
MATH 193, Mathematical Thinking, 3 Cr.
MATH 196, Finite Mathematics, 3 Cr.
MATH 201, Elements of Mathematics I, 3 Cr.
MATH 211, Survey of Calculus I, 3 Cr.
MATH 221, Calculus I, 4 Cr.
MATH 222, Calculus II, 4 Cr.
PHIL 223, Elementary Symbolic Logic, 3 Cr.
STAT 193, Statistical Thinking, 3 Cr.
STAT 219, Statistics for the Social Sciences, 3 Cr.
STAT 239, Statistics for the Biological and Physical Sciences, 3 Cr.

Goal 4: Mathematical Thinking and Quantitative Reasoning

Goal: To increase students' knowledge about mathematical and logical modes of thinking. This will enable students to appreciate the breadth of applications of mathematics, evaluate arguments, and detect fallacious reasoning. Students will learn to apply mathematics, logic, and\or statistics to help them make decisions in their lives and careers. Minnesota's public higher education systems have agreed that developmental mathematics includes the first three years of a high school mathematics sequence through intermediate algebra. (Recommendation from the intersystem Mathematics Articulation Council. Adopted by all Systems in February 1992.)

LEP Objective: Apply mathematics to analyze numerical relationships, solve problems, explain processes and interpret results. Students can meet this requirement through 1 approved course or experience.

Students will be able to:

1. Illustrate historical and contemporary applications of mathematical/logical systems.
2. Clearly express mathematical/logical ideas in writing.
3. Explain what constitutes a valid mathematical/logical argument (proof).
4. Apply higher-order problem-solving and/or modeling strategies.

Consistent with LEP Student Learning Outcomes, students will demonstrate their ability to:

- *Demonstrate knowledge of the basic theories and methods of mathematics.*
- *Use quantitative methods to test hypotheses or to construct quantitative solutions to problems.*
- *Apply mathematical skills and knowledge in other academic disciplines.*
- *Communicate quantitative ideas, both orally and in writing.*

Goal 5: History and the Social and Behavioral Sciences

Goal 5. History and the Social and Behavioral Sciences

Goal: To increase students' knowledge of how historians and social and behavioral scientists discover, describe, and explain the behaviors and interactions among individuals, groups, institutions, events, and ideas. Such knowledge will better equip students to understand themselves and the roles they play in addressing the issues facing humanity.

LEP Objective: Develop understanding of human societies and behaviors, and of the concepts, theories, and methods of history and the social sciences. Students can meet this requirement through 2 approved courses or experiences in different rubrics or academic areas.

Students will be able to:

1. Employ the methods and data that historians and social and behavioral scientists use to investigate the human condition.
2. Examine social institutions and processes across a range of historical periods and cultures.
3. Use and critique alternative explanatory systems or theories.

4. Develop and communicate alternative explanations or solutions for contemporary social issues.

Consistent with LEP Student Learning Outcomes, students will also demonstrate their ability to:

- *Describe or use the methods and data by which historians, social scientists, or behavioral scientists investigate human conditions.*
- *Analyze human behavior, cultures, and social institutions and processes from the perspectives of history or the social and behavioral sciences.*
- *Develop explanations for and explore solutions to historical or contemporary social problems.*
- *Reflect upon themselves in relation to family, communities, society, culture, and/or their histories.*
- *Apply and critique alternative explanatory systems or theories about human societies and behaviors.*

Goal 5: History and the Social and Behavioral Sciences

Goal 5: History and the Social and Behavioral Sciences (2 courses with no more than 4 credits from one rubric or academic area)

AFST 250[8], Introduction to African Studies (Diversity), 3 Cr.
ANTH 101[8], Introduction to Anthropology (Diversity), 3 Cr.
ANTH 130, Introduction to Prehistoric Cultures (Diversity), 3 Cr.
ANTH 188, Indians of the Americas (Diversity), 3 Cr.
ANTH 198, The Anthropology of Modern American Life, 3 Cr.
ANTH 250[8], Introductory Cultural Anthropology (Diversity), 3 Cr.
ART 231[6], Art History Survey II, 3 Cr.
BRIT 250, Contemporary Britain, 3 Cr.
CFS 220, Introduction to Parents and Children, 3 Cr.
CJS 111, Crime and Justice in America (Diversity), 3 Cr.
CMTY 200[8], Cities, Suburbs, and Small Towns, 3 Cr.
CMTY 222[7], Diversity in the American Experience (Diversity/RIS), 3 Cr.
CMTY 394, Urban Planning [Same as GEOG 394], 3 Cr.
CMST 220, Interpersonal Communication, 3 Cr.
COLL 196, First Year Seminar, 3 Cr.
CPSY 101, Applying Psychology [Same as CEEP 101], 3 Cr.
CPSY 262, Human Growth and Development, 3 Cr.
CSD 130[7], Introduction to Human Communication Disorders (Diversity), 3 Cr.
EAST 250[8], Introduction to East Asia (Diversity), 3 Cr.
ECON 197, Economics for Everyday Life, 3 Cr.
ECON 201, Introduction to Economics, 3 Cr.
ECON 205, Principles of Macroeconomics, 3 Cr.
ECON 206, Principles of Microeconomics, 3 Cr.
ECON 381, Economics of Crime and Justice, 3 Cr.
ETHS 312, American Indian Women's Lives, 3 Cr.
ETHS 335, Asian Pacific American Women (Diversity), 3 Cr.
ETHS 345[6], Asian Pacific Americans in Popular Culture (Diversity), 3 Cr.
ETHS 410, Contemporary American Indian Issues, 3 Cr.
ETHS 425, Contemporary Asian Pacific American Issues (Diversity), 3 Cr.
ETS 182[8], Modern Technology and Civilization, 3 Cr.
ETS 183[8], Technology and Third World Development (Diversity), 3 Cr.
ETS 375[10], Society and the Environment, 3 Cr.
GEOG 271, Economic Geography, 3 Cr.
GEOG 394, Urban Planning [Same as CMTY 394], 3 Cr.
GERO 208, Introduction to Gerontology (Diversity), 3 Cr.
GERO 405, Aging and Diversity (Diversity), 3 Cr.
GERO 415, Women and Aging (Diversity), 3 Cr.
GERO 470[8], Global Aging (Diversity), 3 Cr.
GWS 201, Introduction to Women's Studies (Diversity), 3 Cr.
HIST 101[8], Studies in World History, 3 Cr.
HIST 106[8], Historical Studies (Diversity), 3 Cr.
HIST 109[7], Race in America (Diversity/RIS), 3 Cr.
HIST 110[8], Western Civilization I: Antiquity to 1500, 3 Cr.
HIST 111[8], Western Civilization II: 1500-Present, 3 Cr.
HIST 140, America to 1865, 3 Cr.
HIST 141[7], United States Since 1865 (Diversity), 3 Cr.
HIST 150[8], Twentieth Century World (Diversity), 3 Cr.
HIST 195[9], Democratic Citizenship, 3 Cr.
HIST 352[7], American Indian History (Diversity), 3 Cr.
HIST 358[7], Immigration, Race and Ethnicity (Diversity), 3 Cr.
HLTH 215, Personal and Community Health, 3 Cr.
LAST 250[8], Introduction to Latin America (Diversity), 3 Cr.
POL 111[9], American National Government, 3 Cr.

PSY 115, Introduction to Psychology, 3 Cr.
PSY 225, Psychology of Women (Diversity), 3 Cr.
PSY 228[10], Conservation Psychology, 3 Cr.
PSY 240, Developmental Psychology, 3 Cr.
SOC 111[9], Social Problems (Diversity), 3 Cr.
SOC 160, Principles of Sociology, 3 Cr.
SOC 200[10], Environmental Sociology (Diversity), 3 Cr.
SOC 211, Crime Myths and Media (Diversity), 3 Cr.
SOC 273[8], Sociology of Gender (Diversity), 3 Cr.
SOC 276[8], Families and Globalization (Diversity), 3 Cr.
SPED 203, Exceptionalities and Human Diversity (Diversity), 3 Cr.
TH 270[6], American Musical Theatre, 3 Cr.

Goal 6: The Humanities and Fine Arts

Goal 6: Humanities and Fine Arts

Goal 6: Humanities and Fine Arts (2 courses with no more than 4 credits from one rubric or academic area)

ART 130, Studio Art for Non-Majors, 3 Cr.
ART 131[8], Introduction to the Visual Arts of the World (Diversity), 3 Cr.
ART 230[8], Art History Survey I, 3 Cr.
ART 231[5], Art History Survey II, 3 Cr.
ART 333, Art and Literature, 3 Cr.
ART 4338, Asian Art History (Diversity), 3 Cr.
ART 434[8], African Art History (Diversity), 3 Cr.
ART 435[8], Art History of the Americas (Diversity), 3 Cr.
ART 490[8], Folk, Ethnic, and Indigenous Art (Diversity), 3 Cr.
COLL 197, First Year Seminar, 3 Cr.
CMST 210, Performance and Everyday Life, 3 Cr.
CMST 211, Public Speaking, 3 Cr.
CMST 306[2], Rhetoric in Popular Culture, 3 Cr.
CMST 316, Speech Writing, 3 Cr.
CSD 171, American Sign Language, 3 Cr.
DANC 142, Dance for Everyone, 3 Cr.
DANC 341[8], Global Dance Perspectives (Diversity), 3 Cr.
ENGL 184, Introduction to Literature, 3 Cr.
ENGL 201, Classics of Literature, 3 Cr.
ENGL 202, Myth, Legend, and Sacred Literatures, 3 Cr.
ENGL 203, Gender Issues in Literature (Diversity), 3 Cr.
ENGL 215, American Indian Literature (Diversity), 3 Cr.
ENGL 216[7], African American Literature (Diversity/RIS), 3 Cr.
ENGL 280, Understanding Video Games, 3 Cr.
ENGL 305, Lesbian, Gay, Bisexual, Transgender Literature (Diversity), 4 Cr.
ENGL 306[2], Rhetoric in Popular Culture, 3 Cr.
ETHS 301, Special Topics in American Indian Studies, 3 Cr.
ETHS 307, Chicano/a Cultural Expressions, 3 Cr.
ETHS 345[5], Asian Pacific Americans in Popular Culture (Diversity), 3 Cr.
FREN 101[8], Elementary French I, 4 Cr.
FREN 102[8], Elementary French II, 4 Cr.
FREN 110[8],Introduction to French Culture, 3 Cr.
FREN 201[8], Intermediate French I, 4 Cr.
FREN 202[8], Intermediate French II, 4 Cr.
FS 175, Film and Culture, 3 Cr.
FS 260, The Art of Film, 3 Cr.
FS 270, Digital Filmmaking, 4 Cr.
GEOG 270, Introduction to Cultural Geography (Diversity), 3 Cr.
GER 101[8], Elementary German I, 4 Cr.
GER 102[8], Elementary German II, 4 Cr.
GER 110[8], Introduction to German Culture, 3 Cr.
GER 201[8], Intermediate German I, 4 Cr.
GER 202[8], Intermediate German II, 4 Cr.
GWS 330, Gender and Popular Culture, 3 Cr.
HUMS 250, Introduction to the Humanities, 3 Cr.
IM 260, Exploring Digital Media, 3 Cr.
JPN 101[8], Elementary Japanese I (Diversity), 4 Cr.
JPN 102[8], Elementary Japanese II (Diversity), 4 Cr.
JPN 201[8], Intermediate Japanese I, 4 Cr.
JPN 202[8], Intermediate Japanese II, 4 Cr.
LC 101[8], Elementary Foreign Language I (Topical), 4 Cr.
LC 102[8], Elementary Foreign Language II (Topical), 4 Cr.
LC 201[8], Intermediate Foreign Languages I (Topical), 4 Cr.
LC 202[8], Intermediate Foreign Languages II (Topical), 4 Cr.
MCOM 146, American Television and Cultural Diversity (Diversity), 3 Cr.
MCOM 200, Introduction to Mass Communications, 3 Cr.
MCOM 275, Documentaries of the Holocaust (Diversity), 3 Cr.
MUSM 100, Introduction to Musical Concepts, 3 Cr.
MUSM 123, Experiencing Live Music, 3 Cr.
MUSM 125[8], Music in World Culture (Diversity), 3 Cr.
MUSM 126, History of Rock and Roll Music, 3 Cr.
MUSM 229, Jazz History, 3 Cr.
MUSP 110-448, Private Lessons, 1-3 Cr.
MUSP 159[8], World Drumming Group, 1 Cr.
MUSP 155-367, Ensembles, 1 Cr.
MUSP 358, Chamber Singers, 1 Cr.

PHIL 111[8], Multicultural Philosophy (Diversity), 3 Cr.
PHIL 112, Philosophical Explorations, 3 Cr.
PHIL 116, Elementary Topics in Philosophy, 1-3 Cr.
PHIL 211[8], Philosophy and Feminism (Diversity), 3 Cr.
PHIL 212[9], Moral Problems and Theories, 3 Cr.
PHIL 221, Philosophy of Religion, 3 Cr.
PHIL 222, Existentialism, 3 Cr.
PHIL 251, History of Western Philosophy I, 3 Cr.
PHIL 252, History of Western Philosophy II, 3 Cr.
REL 100[8], World Religions (Diversity), 3 Cr.
REL 150, Introduction to the Old Testament/Hebrew Bible, 3 Cr.
RUSS 101[8], Elementary Russian I, 4 Cr.
RUSS 102[8], Elementary Russian II, 4 Cr.
RUSS 110[8],Introduction to Russian Culture, 3 Cr.
RUSS 201[8], Intermediate Russian I, 4 Cr.
RUSS 202[8], Intermediate Russian II, 4 Cr.
SPAN 101[8], Elementary Spanish I, 4 Cr.
SPAN 102[8], Elementary Spanish II, 4 Cr.
SPAN 103[8],, Accelerated Spanish for High Beginners, 4 Cr.
SPAN 110[8], Introduction to Spanish Speaking Cultures, 3 Cr.
SPAN 201[8], Intermediate Spanish I, 4 Cr.
SPAN 202[8], Intermediate Spanish II, 4 Cr.
TH 148, Acting for Everyone, 3 Cr.
TH 231, Introduction to Theatre, 3 Cr.
TH 242, Active Collaboration, 3 Cr.
TH 258, Practical Creativity, 3 Cr.
TH 270[5], American Musical Theatre, 3 Cr.

Goal 6. The Humanities and Fine Arts

Goal: To expand students' knowledge of the human condition and human cultures, especially in relation to behavior, ideas, and values expressed in works of human imagination and thought. Through study in disciplines such as literature, philosophy, and the fine arts, students will engage in critical analysis, form aesthetic judgments, and develop an appreciation of the arts and humanities as fundamental to the health and survival of any society. Students should have experiences in both the arts and humanities.

LEP Objective: Expand appreciation and critical understanding of changing modes of human expression and systems of thought in the arts and humanities, and develop abilities in the creation and performance of meaning. Students can meet this requirement through 2 approved courses or experiences in different rubrics or academic areas.

Students will be able to:

1. Demonstrate awareness of the scope and variety of works in the arts and humanities.
2. Understand those works as expressions of individual and human values within an historical and social context.
3. Respond critically to works in the arts and humanities.
4. Engage in the creative process or interpretive performance.
5. Articulate an informed personal reaction to works in the arts and humanities.

Consistent with LEP Student Learning Outcomes, students will also demonstrate their ability to:

- *Demonstrate awareness of the scope and variety of works in the arts and humanities.*
- *Describe and appreciate works in the arts and humanities as expressions of individual and collective values within an intellectual, cultural, historical and social context.*
- *Interpret and respond critically to works from various cultures in the arts and humanities.*
- *Explore intellectually the ideas expressed in works in the arts and humanities.*
- *Engage in creative processes or interpretive performance.*
- *Articulate an informed personal response to works in the arts and humanities.*
- *Analyze the diverse means of communication in the arts and humanities.*

Goal 7: Human Diversity

Goal 7: Human Diversity

Goal 7: Human Diversity (1 course)

CMTY 222[5], Diversity in the American Experience (Diversity/RIS), 3 Cr.
CSD 130[5], Introduction to Human Communication Disorders (Diversity), 3 Cr.
ENGL 216[6], African American Literature (Diversity/RIS), 3 Cr.
ETHS 111, Race in America (Diversity/RIS), 3 Cr.
ETHS 201, Introduction to Ethnic Studies

(Diversity/RIS), 3 Cr.
ETHS 205, Introduction to Chicano/a Studies (Diversity/RIS), 3 Cr.
ETHS 210, Introduction to American Indian Studies (Diversity/RIS), 3 Cr.
ETHS 215, Introduction to Asian American Studies (Diversity/RIS), 3 Cr.
ETHS 220, Introduction to African American Studies (Diversity/RIS), 3 Cr.
ETHS 308, African American Cultural Expressions (Diversity), 3 Cr.
ETHS 310, American Indians in the Social Science Curriculum (Diversity/RIS), 3 Cr.
ETHS 408, Major Works in African American Studies (Diversity), 3 Cr.
ETHS 470, The Black Community (Diversity/RIS), 3 Cr.
GWS 220, Race and Gender in the U.S. (Diversity/RIS), 3 Cr.
HIST 109[5], Race in America (Diversity/RIS), 3 Cr.
HIST 141[5], United States Since 1864 (Diversity), 3 Cr.
HIST 352[5], American Indian History (Diversity), 3 Cr.
HIST 358[5], Immigration, Race and Ethnicity (Diversity), 3 Cr.
HIST 420, Colonial North America (Diversity), 3 Cr.
HURL 102, Human Relations and Race (Diversity/RIS), 3 Cr.
JWST 180, Anti-Semitism in America (Diversity), 3 Cr.
POL 310, U.S. Politics of Race, Ethnicity, and Immigration (Diversity/RIS), 3 Cr.
REL 180, Religion: Race and Racism (Diversity), 3 Cr.
SOC 268, Race and Ethnicity (Diversity/RIS), 3 Cr.

Goal 7. Human Diversity

Goal: To increase students' understanding of individual and group differences (e.g. race, gender, class) and their knowledge of the traditions and values of various groups in the United States. Students should be able to evaluate the United States' historical and contemporary responses to group differences.

LEP Objective: Examine patterns of racial and ethnic inequality in the United States; the heritage, culture, and contributions of racially subordinated groups; and how race and ethnic relations are embedded in the institutions that structure our lives. Students can meet this requirement through 1 approved course or experience.

Students will be able to:

1. Understand the development of and the changing meanings of group identities in the United States, history and culture.
2. Demonstrate an awareness of the individual and institutional dynamics of unequal power relations between groups in contemporary society.
3. Analyze their own attitudes, behaviors, concepts and beliefs regarding diversity, racism, and bigotry.
4. Describe and discuss the experience and contributions (political, social, economic, etc.) of the many groups that shape American society and culture, in particular those groups that have suffered discrimination and exclusion.
5. Demonstrate communication skills necessary for living and working effectively in a society with great population diversity.

Consistent with LEP Student Learning Outcomes, students will also demonstrate their ability to:

- *Demonstrate awareness and understanding of historical and current race relations in the United States.*
- *Explain the concept of ''race.''*
- *Analyze current events and conditions at the local, statewide, and national levels using course theories and concepts.*
- *Identify forms of institutional discrimination in areas such as education, media, housing, employment, economics, politics, and the legal system.*
- *Describe the basic history of discrimination against and contributions of African Americans, Asian Americans, American Indians, Latinos, and recent immigrants of color.*
- *Engage in dialog and self-reflection concerning racism, racial oppression, and white privilege.*

Goal 8: Global Perspective

Goal 8: Global Perspective

Goal 8: Global Perspective (1 course)

AFST 250[5], Introduction to African Studies (Diversity), 3 Cr.
ANTH 101[5], Introduction to Anthropology (Diversity),

3 Cr.
ANTH 250[5], Introductory Cultural Anthropology (Diversity), 3 Cr.
ART 131[6], Introduction to the Visual Arts of the World (Diversity), 3 Cr.
ART 230[6], Art History Survey I, 3 Cr.
ART 433[6], Asian Art History (Diversity), 3 Cr.
ART 434[6], African Art History (Diversity), 3 Cr.
ART 435[6], Art History of the Americas (Diversity), 3 Cr.
ART 490[6], Folk, Ethnic, and Indigenous Art (Diversity), 3 Cr.
ASTR 120[3], Archaeoastronomy (Diversity), 3 Cr.
BLAW 230, Consumer and Personal Law, 3 Cr.
BRIT 101, Introduction to the British Cultural Experience, 1 Cr.
BRIT 201, Reflections on the British Cultural Experience, 2 Cr.
CFS 260, Children in a Changing World (Diversity), 3 Cr.
CMST 330, Intercultural Communication (Diversity), 3 Cr.
CMTY 200[5], Cities, Suburbs, and Small Towns, 3 Cr.
CSD 230, Global Perspectives on Communication Disorders (Diversity), 3 Cr.
DANC 341[6], Global Dance Perspectives (Diversity), 3 Cr.
EAST 250[5], Introduction to East Asia (Diversity), 3 Cr.
ECON 350, Economics of Developing Countries (Diversity), 3 Cr.
ENTR 200, Principles of Entrepreneurship, 3 Cr.
ETS 182[5], Modern Technology and Civilization, 3 Cr.
ETS 183[5], Technology and Third World Development (Diversity), 3 Cr.
ETS 185[10], Energy Resources and Issues, 3 Cr.
FREN 101[6], Elementary French I, 4 Cr.
FREN 102[6], Elementary French II, 4 Cr.
FREN 110[6], Introduction to French Culture, 3 Cr.
FREN 201[6], Intermediate French I, 4 Cr.
FREN 202[6], Intermediate French II, 4 Cr.
GEOG 111, Introduction to Global Geography (Diversity), 3 Cr.
GER 101[6], Elementary German I, 4 Cr.
GER 102[6], Elementary German II, 4 Cr.
GER 110[6], Introduction to German Culture, 3 Cr.
GER 201[6], Intermediate German I, 4 Cr.
GER 202[6], Intermediate German II, 4 Cr.
GERO 470[5], Global Aging (Diversity), 3 Cr.
GLST 195[9], Global Society and Citizenship, 3 Cr.
GWS 340, Global Feminisms, 3 Cr.,
HIST 101[5], Studies in World History, 3 Cr.
HIST 106[5], Historical Studies (Diversity), 3 Cr.
HIST 110[5], Western Civilization I: Antiquity to 1500, 3 Cr.
HIST 111[5], Western Civilization II: 1500-Present, 3 Cr.
HIST 150[5], Twentieth Century World (Diversity), 3 Cr.
HTSM 111, Introduction to Hospitality and Tourism, 3 Cr.
HTSM 215, Geography of Tourism, 3 Cr.
HURL 303[10], Global Social and Environmental Justice, 3 Cr.
IM 204, Research Strategies in a Changing World (Diversity), 3 Cr.
JPN 101[6], Elementary Japanese I (Diversity), 4 Cr.
JPN 102[6], Elementary Japanese II (Diversity), 4 Cr.
JPN 201[6], Intermediate Japanese I, 4 Cr.
JPN 202[6], Intermediate Japanese II, 4 Cr.
LAST 250[5], Introduction to Latin America (Diversity), 3 Cr.
LC 101[6], Elementary Foreign Language I (Topical), 4 Cr.
LC 102[6], Elementary Foreign Language II (Topical), 4 Cr.
LC 201[6], Intermediate Foreign Languages I (Topical), 4 Cr.
LC 202[6], Intermediate Foreign Languages II (Topical), 4 Cr.
LIB 290, Social Media in a Global Context (Diversity), 3 Cr.
MGMT 260, Principles of International Business, 3 Cr.
MKTG 100, Contemporary Business Concepts, 3 Cr.
MUSM 125[6], Music in World Culture (Diversity), 3 Cr.
MUSP 159[6], World Drumming Group, 1 Cr.
PHIL 111[6], Multicultural Philosophy (Diversity), 3 Cr.
PHIL 211[6], Philosophy and Feminism (Diversity), 3 Cr.
PHIL 327[9], Global Justice, 3 Cr.
PHIL 484[9], Global Business Ethics, 3 Cr.
POL 101, Political Ideas and Institutions, 3 Cr.
POL 251, Introduction to World Politics, 3 Cr.
POL 333, Latin American Government and Politics, 3 Cr.
POL 334, Middle East Government and Politics, 3 Cr.
POL 335, African Government and Politics (Diversity), 3 Cr.
POL 337, Emerging Political Issues in the Nonwestern World (Diversity), 3 Cr.
POL 434, Politics of the Arab Peninsula (Diversity), 3 Cr.
POL 436, Southeast Asian Governments and Politics (Diversity), 3 Cr.
REL 100[6], World Religions (Diversity), 3 Cr.
REL 225, Asian Religions (Diversity), 3 Cr.
RUSS 101[6], Elementary Russian I, 4 Cr.
RUSS 102[6], Elementary Russian II, 4 Cr.

RUSS 110[6], Introduction to Russian Culture, 3 Cr.
RUSS 201[6], Intermediate Russian I, 4 Cr.
RUSS 202[6], Intermediate Russian II, 4 Cr.
SOC 273[5], Sociology of Gender (Diversity), 3 Cr.
SOC 276[5], Families and Globalization (Diversity), 3 Cr.
SPAN 100, Spanish for Health Care Professionals, 3 Cr.
SPAN 101[6], Elementary Spanish I, 4 Cr.
SPAN 102[6], Elementary Spanish II, 4 Cr.
SPAN 103[6], Accelerated Spanish for High Beginners, 4 Cr.
SPAN 110[6], Introduction to Spanish Speaking Cultures, 3 Cr.
SPAN 201[6], Intermediate Spanish I, 4 Cr.
SPAN 202[6], Intermediate Spanish II, 4 Cr.

Goal 8. Global Perspective

Goal: To increase students' understanding of the growing interdependence of nations and peoples and develop their ability to apply a comparative perspective to cross-cultural social, economic and political experiences.

LEP Objective: Develop a comparative perspective and understanding of one's place in a global context. Students can meet this requirement through 1 approved course or experience.

Students will be able to:

1. Describe and analyze political, economic, and cultural elements which influence relations of states and societies in their historical and contemporary dimensions.
2. Demonstrate knowledge of cultural, social, religious and linguistic differences.
3. Analyze specific international problems, illustrating the cultural, economic, and political differences that affect their solution.
4. Understand the role of a world citizen and the responsibility world citizens share for their common global future.

Consistent with LEP Student Learning Outcomes, students will also demonstrate their ability to:

- *Explain how they are connected and related to people elsewhere in the world.*
- *Describe similarities and differences among global places and populations.*
- *Analyze how political, economic or cultural elements influence relations among the world's states, peoples, or societies.*
- *Analyze specific international issues and propose and evaluate responses.*
- *Articulate a vision of their individual roles and responsibilities in a common global future.*

Goal 9: Ethical and Civic Responsibility

Goal 9: Ethical and Civic Responsibility

Goal 9: Ethical and Civic Responsibility (1 course)

BLAW 235, The Legal, Ethical, and Global Environment of Business, 3 Cr.
CMTY 195, Community and Democratic Citizenship, 3 Cr.
ECE 101, Introduction to the Engineering Profession (Same as GENG 101), 3 Cr.
ECON 195, Economics and Democratic Citizenship, 3 Cr.
GENG 101, Ethics and the Engineering Profession (Same as ECE 101), 3 Cr.
GLST 195[8], Global Society and Citizenship, 3 Cr.
HIST 195[5], Democratic Citizenship, 3 Cr.
HURL 201, Non-Oppressive Relationships I (Diversity), 3 Cr.
LC 445, Service Learning Experience, 2-4 Cr.
PHIL 212[6], Moral Problems and Theories, 3 Cr.
PHIL 213[10], Environmental Ethics, 3 Cr.
PHIL 327[8], Global Justice, 3 Cr.
PHIL 328, Bioethics (Diversity), 3 Cr.
PHIL 484[8], Global Business Ethics, 3 Cr.
POL 111[5], American National Government, 3 Cr.
POL 320, Women in Politics (Diversity), 3 Cr.
REL 201, Religious Pluralism, 3 Cr.
SOC 111[5], Social Problems (Diversity), 3 Cr.
SW 195, Social Welfare and Democratic Citizenship, 3 Cr.

Goal 9. Ethical and Civic Responsibility

Goal: To develop students' capacity to identify, discuss, and reflect upon the ethical dimensions of political, social, and personal life and to understand the ways in which they can exercise responsible and productive citizenship. While there are diverse views of social justice or the common good in a pluralistic society, students should learn that responsible citizenship requires them to develop skills to

understand their own and others, positions, be part of the free exchange of ideas, and function as public-minded citizens.

LEP Objective: Understand and evaluate ethical or civic issues and theories, and participate in active citizenship or ethical judgment. Students can meet this requirement through 1 approved course or experience.

Students will be able to:

1. Examine, articulate, and apply their own ethical views.
2. Understand and apply core concepts (e.g. politics, rights and obligations, justice, liberty) to specific issues.
3. Analyze and reflect on the ethical dimensions of legal, social, and scientific issues.
4. Recognize the diversity of political motivations and interests of others.
5. Identify ways to exercise the rights and responsibilities of citizenship.

Consistent with LEP Student Learning Outcomes, students will also demonstrate their ability to:

- *Explain the connections among education, citizenship, and participation in a democratic society.*
- *Explain major ethical or political theories.*
- *Describe how interpretations of ethics or citizenship may vary by nationality, ethnicity, race, color, religion, gender, ability and disability, or sexual orientation.*
- *Apply concepts such as democracy, rights, morality, justice, virtue, liberty and obligation to personal, professional, and public issues.*
- *Analyze and evaluate alternative theoretical approaches or formulate solutions to ethical or civic issues.*
- *Develop and exercise personal agency or ethical judgment in the public domain.*

Goal 10: People and the Environment

Goal 10: People and the Environment

Goal 10: People and the Environment (Minimum 1 course)

AHS 106[3], Natural Hazards and Human Society, 3 Cr.
ANTH 252, Human Ecology, 3 Cr.
BIOL 101*[3], Environment and Society, 3 Cr.
BIOL 102*[3], The Living World, 3 Cr.
BIOL 152*[3], Organismal Diversity, 4 Cr.
CHEM 105[3], Chemistry and the Environment, 3 Cr.
ENVE 201, Introduction to Environmental Engineering, 3 Cr.
ETS 185[8], Energy Resources and Issues, 3 Cr.
ETS 260, Introduction to Environmental Studies, 3 Cr.
ETS 363, Resource Management, 3 Cr.
ETS 375[5], Society and the Environment, 3 Cr.
GEOG 106, People and the Planet, 3 Cr.
GEOG 372, Conservation of World Resources, 3 Cr.
HLTH 482, Environmental Health, 3 Cr.
HURL 303[8], Global Social and Environmental Justice, 3 Cr.
PHIL 213[9], Environmental Ethics, 3 Cr.
PHYS 208[3], Energy and Environment, 3 Cr.
POL 453, Global Environmental Politics and Policies, 3 Cr.
PSY 228[5], Conservation Psychology, 3 Cr.
SOC 200[5], Environmental Sociology (Diversity), 3 Cr.

Goal 10. People and the Environment

Goal: To improve students, understanding of today's complex environmental challenges. Students will examine the interrelatedness of human society and the natural environment. Knowledge of both bio-physical principles and socio-cultural systems is the foundation for integrative and critical thinking about environmental issues.

LEP Objective: Examine the interrelationship of humans and the natural worlds from scientific and socio-cultural perspectives and the complex environmental challenges that result. Students can meet this requirement through 1 approved course or experience.

Students will be able to:

1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
2. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
3. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.

4. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
5. Propose and assess alternative solutions to environmental problems.
6. Articulate and defend the actions they would take on various environmental issues.

Consistent with LEP Student Learning Outcomes, students will also demonstrate their ability to:

- *Explain the basic structure and function of various ecosystems and human adaptive strategies within those systems.*
- *Discern patterns of interrelationships of bio-physical and socio-cultural systems.*
- *Describe the human institutional arrangements (social, legal, political, economic, and religious) that deal with environmental and natural resource challenges.*
- *Analyze environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.*
- *Propose and assess alternative solutions to environmental problems including issues involving sustainability.*

Academic Programs

Accounting

BS

Accounting: Degree Maps

- Bachelor of Science: Accounting (Updated: 9/14/2018)

Accounting

Chairperson: Kerry Marrer
Address: 442 Centennial Hall
Phone: 320.308.3038
Email:acct2b@stcloudstate.edu
Website: www.stcloudstate.edu/accounting**Faculty:** Faculty

BS - Accounting *(91 credits)*

Admission Requirements

- GPA: 2.65
- 3.00 GPA in ACCT 291, ACCT 292
- 40 earned credits (from courses numbered 100 or higher).
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements

Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341. Accounting Major Required Courses (21 credits): ACCT 381, ACCT 382, ACCT 383, ACCT 390, ACCT 450, ACCT 451, ACCT 486.

Electives

Select 15 credits: ACCT 294, ACCT 304, ACCT 344, ACCT 404, ACCT 405, ACCT 444, ACCT 470, ACCT 481, ACCT 484, ACCT 485, ACCT 487, ACCT 490, ACCT 493, ACCT 498, BLAW 436; or 12 credits from listed courses plus 3 credits from 300- and 400-level courses in BLAW, FIRE, IS, MGMT, MKTG and 400-level courses in ECON. A maximum of three credits of ACCT 344 or 444 can count toward these 15 credits. A maximum of 9 credits of ACCT 490 with different topics can count toward these 15 credits.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ACCT 451.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Certificate - CPA Exam Education Eligibility Program *(24 credits)*

- Admission RequirementsEarned undergraduate degree in business from a four-year regionally accredited college or university.

Program Requirements

ACCT 601, ACCT 602, ACCT 608, ACCT 614, ACCT 682, ACCT 690, ACCT 693, ACCT 697

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Certificate

Accounting

Chairperson: Kerry Marrer
Address: 442 Centennial Hall
Phone: 320.308.3038
Email:acct2b@stcloudstate.edu
Website:
www.stcloudstate.edu/accounting**Faculty:** Faculty

Certificate - CPA Exam Education Eligibility Program *(24 credits)*

- Admission RequirementsEarned undergraduate degree in business from a four-year regionally accredited college or university.

Program Requirements

ACCT 601, ACCT 602, ACCT 608, ACCT 614, ACCT 682, ACCT 690, ACCT 693, ACCT 697

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Anthropology

BA and Minor

Anthropology: Degree Maps

- Bachelor of Arts: Anthropology (Updated: January 2018)

Anthropology

Chair: Debra Gold
Address: 262 Stewart Hall
Phone: 320.308.2294
Email: anthropology@stcloudstate.edu
Website:www.stcloudstate.edu/anthropology
Faculty: Anthropology

BA - Anthropology *(45 credits)*

Notes

- Completion of SOC 304 is strongly recommended.
- It is expected that students pursuing the cultural research sequence will select a contemporary area course and those pursuing the archaeology research sequence will select a prehistory course.

Program Requirements

Anthropology Core (12 credits): ANTH 230, ANTH 240, ANTH 250, ANTH 260. Theory and Practice (6 credits): ANTH 350, ANTH 480. Research sequence (12 credits): Cultural sequence: ANTH 450, ANTH 455, ANTH 470 or Archaeology sequence: ANTH 430, ANTH 435, ANTH 470. World Culture Area Course (3 credits), select one course: ANTH 310, ANTH 311, ANTH 312, ANTH 432, or ANTH 433. A course in American Indian societies and cultures may be substituted.

Electives

12 credits: Select from ANTH courses at the 200-level or above. No more than 3 credits may be taken at the 200 level. ANTH 390, ANTH 391, or ANTH 392 may be repeated for a maximum of 9 credits each.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ANTH 470.

Program Student Learning Outcomes

- A broad knowledge of the discipline of anthropology and its four fields.

- An understanding of contemporary evolutionary theory, including genetic variability, heredity, and natural selection in the microevolution of populations; evolutionary processes leading to macroevolutionary change (speciation); major patterns of variation and adaptation in modern human populations; the place of the human species within a broader context of primate biology and evolution, and an appreciation of how studies of our closest relatives shed light of human behavior and adaptation; the evolutionary history of our subfamily Homininae, involving both knowledge of the fossil evidence for human evolution and the influence of cultural innovation on human evolutionary patterns; and what it means to say that human beings are biocultural organisms.
- An understanding of the anthropological concept of culture, including how knowledge of human cultural learning demonstrates the lack of evidence for the existence of biological "races"; how anthropological views of culture have changed over time; how cultural anthropologists use participant-observation to learn about the ways of life of living peoples; the importance of symbolic activity in human activities such as language, the arts, and other creative human activities; how cultural patterns vary over time and across the world; and how cultural anthropologists study contemporary changes in the ways human beings live.
- An understanding of anthropological approaches to the human past, including theory in archaeology, archaeological field methods, analysis and interpretation of archaeological data, and cultural patterns and cultural change in the human past.
- Knowledge of major research methods used in anthropology, with firsthand research experience in at least one major formal method.
- The ability to read, think and evaluate information critically.
- The ability to analyze qualitative and quantitative data.
- Writing skills: the ability to communicate ideas clearly, to synthesize information, and the ability to analyze and apply anthropological concepts.
- Knowledge of, and respect for, human cultural diversity worldwide and through time..
- Understanding and application of anthropological theory and method to a variety of settings.

Minor - Anthropology *(24 credits)*

Program Requirements

Anthropology Core (12 Credits): ANTH 230, ANTH 240, ANTH 250, ANTH 260. World Culture Area (3 credits), select one course: ANTH 310, ANTH 311, ANTH 312, ANTH 432, ANTH 433. A course in American Indian societies and cultures may be substituted.

Electives

9 Credits: Select from ANTH courses at the 200-level or above. No more than 3 credits may be taken at the 200-level. ANTH 390, ANTH 391, or ANTH 392 may be repeated for a maximum of 6 credits each.

MS - Cultural Resources Management Archaeology

Anthropology

Chair: Debra Gold
Address: 262 Stewart Hall
Phone: 320.308.2294
Email: anthropology@stcloudstate.edu
Website:www.stcloudstate.edu/anthropology
Faculty: Anthropology

MS - Cultural Resources Management Archaeology *(36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is required but may be waived. See program website for waiver information.
- Submission of a resume is required. See program website for what should be on the resume.

Notes

- Distance learning applicants should refer to program website for additional admission requirements.
- Comprehensive exam is required for Plan C
- See program webpage for a list of electives.
- Anyone interested is encouraged to apply, however, individuals with a bachelor's degree in anthropology, archaeology, heritage preservation, human geography, or history will be best prepared; all other majors please contact the program director.

Plan A
Option(s): Thesis
Credits: 36
Core: 24 credits: ANTH 532 or ANTH 533, ANTH 630, ANTH 631, ANTH 632, ANTH 640 or ANTH 650, ANTH 652, and 6 credits of ANTH 644.
Electives: 6 credits from: ANTH 531, ANTH 547, ANTH 550, ANTH 563, ANTH 592; ANTH 640, ANTH 650; ANTH 660, ACCT 591, CEEP 678, GEOG 516, GEOG 572, HIST 672, HIST 673, 3 credits of STAT 501
Research: 6 credits ANTH 699

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: 27 credits: ANTH 532 or ANTH 533, ANTH 630, ANTH 631, ANTH 632, ANTH 640 or ANTH 650, ANTH 652, and 9 credits of ANTH 644
Electives: 9 credits: ANTH 531, ANTH 547, ANTH 550, ANTH 563, up to 6 credits of ANTH 592, ANTH 640, ANTH 650, ANTH 660, ACCT 591, CEEP 678, GEOG 516, GEOG 572, HIST 672, HIST 673, 3 credits of STAT 501
Research: See program webpage for description of culminating project requirements for the Plan C portfolio.

Program Student Learning Outcomes

- A broad knowledge of the history, philosophy and legislation related to managing cultural resources and historic preservation in the United States.
- An understanding of professional ethics that include the research, conservation, interpretation, preservation, and stewardship of cultural resources.
- The ability to work cooperatively and respectfully with representatives from federal and state agencies, Native American communities, non-profit and for-profit companies, and general members of the public.
- The ability to produce a theoretically and methodologically sound research design for identifying, evaluating, and recovering data from cultural resources that adheres to professional research standards.
- Apply anthropological approaches to the human past that integrate contemporary archaeological theory, methods, and analytical techniques to understand long term patterns and change through time for both research and compliance projects.
- Demonstrate a broad knowledge of four-field anthropology, including theory and methods employed in the biological and cultural subdisciplines.

Certificate - Cultural Resources Management *(18 credits)*

Admission Requirements

- GPA: 2.5
- Students entering the certificate program without an undergraduate degree in anthropology should see the department website for admission requirements.

Program Requirements
(12 Credits) ANTH 630, ANTH 631, ANTH 640, ANTH 650.

Electives
6 Credits from: ANTH 530, ANTH 531, ANTH 532, ANTH 533, ANTH 547, ANTH 550, ANTH 563, ANTH 588, ANTH 592, ANTH 600, or ANTH 632

Applied Clinical Research

MS

Applied Clinical Research

Director: Susan Petersen-Stejskal
Address: 9750 Rockford Road, Plymouth
Phone: 320-308-2167
Email: acr@stcloudstate.edu
Website: www.stcloudstate.edu/graduate/applied-clinical-research

MS - Applied Clinical Research *(34-46 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- A baccalaureate degree in science, engineering, math, statistics, nursing or other appropriate and relevant area is required.
- Submit resume.

Notes

- See department website www.msacr.com
- Three years of post undergraduate working experience is recommended.
- Recent undergraduates may be considered for admission.

Plan B
Option(s): Capstone
Credits: 34
Core: (32 credits): ACR 620, ACR 622, ACR 624, ACR 626, ACR 628, ACR 630, ACR 632, ACR 634, ACR 636, ACR 640, and ACR 641.
Electives:
Research: (2 credits): ACR 696

Plan C
Option(s): Portfolio/Internship
Credits: 38-46
Core: (32 credits): ACR 620, ACR 622, ACR 624, ACR 626, ACR 628, ACR 630, ACR 632, ACR 634, ACR 636, ACR 640, and ACR 641.
Electives: (2-8 credits): Select any two courses from the Regulatory Affairs and Services, Medical Technology Quality, or Applied Clinical Research with adviser's approval.
Research: (4-6 credits) ACR 644

Program Student Learning Outcomes

- Synthesize and Apply Principles of Clinical Research Design and Conduct.
- Critique and Describe History of Protections and Regulations.
- Manage Logistics and Scientific Requirements of Clinical Trials.
- Synthesize and Apply Ethical Practices in Clinical Research.
- Appraise the Stakeholders of Clinical Research.
- Demonstrate Effective Professional Communication and Problem Solving Skills.

Certificate - Applied Clinical Research *(17 credits)*

Admission Requirements

- GPA: 2.75
- An undergraduate degree in engineering, science, biochemistry, biostatistics, public health, nursing or other appropriate and relevant areas is recommended.
- Admission to the SCSU Graduate School.
- The GRE is not required.

Plan B
Option(s): Capstone
Credits: 17
Core: (14 Credits) ACR 620, ACR 622, ACR 624, ACR 628, ACR 641
Electives: Choose 3 credits from the following: ACR 626, ACR 634
Research:

Program Student Learning Outcomes

- Synthesize and Apply Principles of Clinical Research Design and Conduct.
- Critique and Describe History of Protections and Regulations.
- Manage Logistics and Scientific Requirements of Clinical Trials.
- Synthesize and Apply Ethical Practices in Clinical Research.
- Appraise the Stakeholders of Clinical Research.
- Demonstrate Effective Professional Communication and Problem Solving Skills.

Art

BA,BS and Minor

Art Department

Chairperson: Rosemary Williams
Address: 101 Kiehle Visual Arts Center
Phone: 320-308-4283
Email:art@stcloudstate.edu**Website:** www.stcloudstate.edu/art

BA - Art *(50-51 credits)*

- Admission RequirementsArt department allows direct admit to all programs

Notes

- Students must pass a portfolio review (benchmark) after successful completion of First Year Foundation courses (ART 101, ART 102, ART 103, ART 104, ART 105). Students have two opportunities to pass the portfolio review.
- Must have 2.5 overall GPA to graduate.

Program Requirements

First Year Foundations 15 credits: ART 101, ART 102, ART 103, ART 104, ART 105. Second Year Foundations: (12 credits) ART 201, ART 202, ART 230, ART 231.

Electives

18 credits upper-division studio electives: Select 6-9 from the following: ART 309, ART 311, ART 315, ART 340, ART 350, ART 351, ART 360, ART 370, ART 381, ART 382, ART 383, ART 385, ART 389. Select 3-6 from the following: ART 360, ART 370. Select 6 from the following: ART 312, ART 341, ART 352, ART 361, ART 371, ART 381 (if repeated), ART 382 (if repeated), ART 384, ART 386, ART 389 (if not taken above). Art history electives from the following (6 credits): ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Program Student Learning Outcomes

- Demonstrate technical skills sufficient to achieve basic visual communication and expression in one or more media.
- Demonstrate perceptual development to achieve basic visual communication and expression in one or more media.
- Demonstrate workable connections between concept and media.
- Place works of art/design in historical, cultural and stylistic contexts.
- Demonstrate understanding of the nature of contemporary thinking on art and design.
- Demonstrate rudimentary discernment of quality in design projects and works of art.

BA - Art History *(36 credits)*

- Admission RequirementsArt department allows direct admit to all programs.

Notes

- This major requires either one year in a single foreign language OR a minor.
- Students planning on graduate studies in art history should take at least two years of a single foreign language.
- Must have 2.5 overall GPA to graduate.

Program Requirements

ART 230, ART 231, ART 433, ART 434, ART 435, ART 436, ART 437, ART 438.

Electives

Art History Topics or Internship. Select 6 credits from ART 439 or select 3 credits from ART 444 and 3 credits from ART 439. Studio Course (3): ART 101, ART 102, ART 104, ART 130. Related Disciplinary Electives (3 credits): ANTH 301, DANC 341, FS 294, FS 394, FS 451, FS 452, FS 453, FS 464, FS 496, MUSM 353, PHIL 323.

Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Program Student Learning Outcomes

- Acquaintance with the art history of non-Western cultures.
- General knowledge of the monuments of all major visual art periods in the west.
- General knowledge of the principal artists of all major visual art periods in the west.
- Theory within the context of applicable art works.
- General historical knowledge within the context of applicable art works.
- Analytical and critical essay writing.
- Research tools and praxis.

BS - Art Education *(53 credits)*

- Admission RequirementsArt department allows direct admit to all programs.

Notes

- Students must pass a portfolio review (benchmark) after successful completion of First Year Foundation courses (ART 101, ART 102, ART 103, ART 104, ART 105). Students have two opportunities to pass the portfolio review.
- Must maintain 2.75 average overall for admission to Teacher Education and for licensure.

Program Requirements
First Year Foundations 15 credits: ART 101, ART 102, ART 103, ART 104, ART 105. Second Year Foundations (12 credits): ART 201, ART 202, ART 230, ART 231. Art Education courses (8 credits): ART 390, ART 395, ART 490. Studio courses (15 credits): ART 340, ART 350 or ART 351, ART 360, ART 370, ART 385.

Electives
Art history electives select 3 credits: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Program Student Learning Outcomes

- The potential to inspire others and to excite the imagination of students, engendering a respect and desire for art and visual experiences.
- The ability and desire to seek out, evaluate, and apply new ideas and developments in both art and education.
- The ability to maintain positive relationships with individuals and various social and ethnic groups, and empathize with students and colleagues of differing backgrounds.
- The ability to articulate and communicate the goals of an art program to pupils, colleagues, administrators, and parents in an effective and professionally responsible manner.
- Familiarity with the basic expressive, technical, procedural and organizational skills, and conceptual insights which can be developed through studio art and design experiences. Instruction should include traditional processes as well as newer technological developments in environmental and functional design fields.

Minor - Art (BA) *(27 credits)*

Program Requirements
First Year Foundations 15 credits: ART 101, ART 102, ART 103, ART 104, ART 105 and ART 230, ART 231.

Electives
6 credits of Studio electives from the following: ART 309, ART 340, ART 350, ART 351, ART 360, ART 370, ART 381, ART 382, ART 383, ART 385, ART 389.

Program Student Learning Outcomes

- Demonstrate technical skills sufficient to achieve basic visual communication and expression in one or more media.
- Demonstrate perceptual development to achieve basic visual communication and expression in one or more media.
- Demonstrate workable connections between concept and media.
- Place works of art/design in historical, cultural and stylistic contexts.

- Demonstrate understanding of the nature of contemporary thinking on art and design.
- Demonstrate rudimentary discernment of quality in design projects and works of art.

Minor - Graphic Design *(21 credits)*

- Admission RequirementsCompletion of ART 101, ART 102, ART 105

Program Requirements
ART 101, ART 102, ART 105, ART 220, ART 221; one from ART 320, ART 321, ART 322; one from ART 332, ART 436.

Program Student Learning Outcomes

- Demonstrate understanding of problem identification and research, information gathering and analysis in visual communication.
- Describe and analyze audiences and situations involved in visual communication.
- Demonstrate understanding of symbolic representation, typography and aesthetics.
- Create and develop visual form in response to communication problems.
- Demonstrate an understanding of art or design history.

Minor - New Media - Music and Art *(24 credits)*

Notes

- Minors in New Media - Music and Art need art department permission to register for art courses.
- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.

Program Requirements
ART 105, ART 202, MUSM 433, MUSM 434, MUSM 435 (15). Select one course from the following (3): MUSM 437, MUSM 438. Select two courses from the following (6): ART 381, ART 382, ART 383, ART 384, ART 385, ART 386.

Certificate - Curating as Studio Practice *(15 credits)*

Admission Requirements

- GPA: 2.5

Program Requirements
12 credits: ART 231, ART 437, ART 438, ART 439

Electives
3 credits: ART 361, ART 433, ART 434, ART 435, ART 436, or ART 439

BFA

Art Department

Chairperson: Rosemary Williams
Address: 101 Kiehle Visual Arts Center
Phone: 320-308-4283
Email:art@stcloudstate.edu**Website:** www.stcloudstate.edu/art

BFA - Art *(78 credits)*

Admission Requirements

- GPA: 2.50
- Completed AFA-Art from a regionally accredited institution or equivalent with an overall 2.50 GPA.
- Successful completion of formal portfolio review that includes the following: 3 observational drawings, 2 works demonstrating 2D design principles, 2 3D objects, non-digital, using different materials, 1 work using Photoshop, 1 work using Illustrator, 3-5 works of choice. See Notes.
- Written statement responding to specific prompts.
- Formal presentation of portfolio to SCSU art faculty.
- Interview by SCSU art faculty.

Notes

- A student may receive a conditional pass of the portfolio review if the overall quality of work is adequate but an

essential element was inadequate or missing – for example 3D work or digital work. In such a case the specific SCSU foundation course(s) would be indicated that the applicant would need to complete with a grade of 2.67 (B-) or higher. After successfully completing the course(s) the student would be admitted into the program (there would not need to be a second portfolio review).
- Students must earn an overall GPA of 2.50 to graduate with a BFA in Art.

Program Requirements
Transfer art credits: 30. SCSU art credits: 48. Studio Foundations, 24 credits (Transfer): 100- 200- level studio courses. 2nd-year Foundations, Art History Surveys, 6 credits (Transfer): ART 230, ART 231 equivalents. The following courses are taken at SCSU, 48 credits: 2nd-year Foundations, 6 credits: ART 201, ART 202. Upper-Division Studio, 30 credits from the following three areas. At least 12 credits must be from one of the areas. Area A, 2D Media: ART 311, ART 312 (3-6 cr), ART 315, ART 340, ART 341 (3-6 cr), ART 350, ART 351, ART 352 (3-6 cr). Area B, 3D Media: ART 360, ART 361 (3-6 cr), ART 370, ART 371 (3-6 cr). Area C, Integrated Media: ART 381 (3-6 cr), ART 382 (3-6 cr), ART 383, ART 384 (3-6 cr), ART 385, ART 386 (3-6 cr), ART 389. Advanced Studies, 9 credits: ART 401 (6 cr), ART 402. Advanced Art History, 3 credits from the following: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

BFA - Graphic Design *(81 credits)*

- Admission RequirementsArt department allows direct admit to all programs.
- Students may be directly admitted with a 60-credit AFA in art that preferably includes 24 credits of studio and 6 credits of art history. The cumulative AFA GPA must be 2.5 or higher.

Notes

- Students must pass a portfolio review (benchmark) after successful completion of First Year Foundation courses (ART 101, ART 102, ART 103, ART 104, ART 105). Students transferring in with an AFA must successfully complete a portfolio review during their first semester. Students have two opportunities to pass the portfolio review.
- Must have 2.5 overall GPA to graduate.
- AFA Transfer students who cannot complete the LEP/Minnesota Transfer Curriculum in 9 credits, who have less than 24 credits of studio, or less than 6 credits of art history will have to take more than 60 credits at SCSU to make up the deficit.
- Students transferring in with an AFA should see an Art Department advisor to determine if there may be additional credits required to complete the BFA.

Program Requirements
(60 credits or 33 credits with AFA) A completed AFA or First Year Foundations (15 credits): ART 101, ART 102, ART 103, ART 104, ART 105. A completed AFA or Second Year Foundations (12 credits): ART 201, ART 202, ART 230, ART 231. Graphic Design Courses (27 credits): ART 220, ART 221, ART 320, ART 321, ART 322, ART 323, ART 420, ART 421, ART 422, and 6 credits of Graphic Design Internship ART 444.

Electives
(21 credits or 18 credits with AFA) 12 credits of Studio electives or a completed AFA and 9 credits from the following: ART 311, ART 315, ART 340, ART 350, ART 351, ART 360, ART 370, ART 381, ART 382, ART 383, ART 385, ART 389. 3 credits of Studio electives from the following: ART 312, ART 341, ART 352, ART 361, ART 371, ART 384, ART 386. 6 credits of Art History with at least 3 credits from the following: ART 332, ART 436. Remaining art history electives from the following: ART 332, ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Program Student Learning Outcomes

- Demonstrate functional competency with principles of visual organization, including the ability to work with visual elements in two and three dimensions; color theory and its applications; and drawing.
- Demonstrates perceptual acuity, conceptual understanding and technical facility at a professional entry level in their chosen field(s).
- Analyze works of art/design perceptively and to evaluate them critically.
- Place works of art/design in historical, cultural and stylistic contexts.
- Demonstrate working knowledge of technologies and equipment applicable to their area(s) of specialization.
- Work independently on a variety of art and/or design problems by combining, as appropriate to the issue, their capabilities in studio, analysis, history and technology.
- Demonstrate competence by the development of a body of work for evaluation in the major area of study.

BFA - Studio Art - 2-D Media *(81 credits)*

- Admission RequirementsArt department allows direct admit to all programs.

Notes

- Students must pass a portfolio review (benchmark) after successful completion of First Year Foundation courses (ART 101, ART 102, ART 103, ART 104, ART 105). Students have two opportunities to pass the portfolio review.
- BFA Studio Art majors must select a concentration at the time of their portfolio review.
- Must have 2.5 overall GPA to graduate.

Program Requirements
First Year Foundations (15 credits): ART 101, ART 102, ART 103, ART 104, ART 105. Second Year Foundations (12 credits): ART 201, ART 202, ART 230, ART 231. Required Studio (18 credits): ART 360, ART 370, ART 381, ART 383, ART 385, ART 389. Concentration (15 credits): Core (9 credits): ART 311 or ART 315, ART 340, ART 350 or ART 351. 2-D Media Electives (6 credits): ART 312 (3-6), ART 341 (3-6), ART 352 (3-6). Advanced Studies (9 credits): ART 401 (6 credits), ART 402. Art History (3 credits) ART 437.

Electives
Studio electives from the following (6 credits): ART 361, ART 371, ART 382, ART 384, ART 386. Art History Elective (3 credits): ART 433, ART 434, ART 435, ART 436, ART 438, ART 439.

Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Program Student Learning Outcomes

- Demonstrate functional competency with principles of visual organization, including the ability to work with visual elements in two and three dimensions; color theory and its applications; and drawing.
- Demonstrates perceptual acuity, conceptual understanding and technical facility at a professional entry level in their chosen field(s).
- Analyze works of art/design perceptively and to evaluate them critically.
- Place works of art/design in historical, cultural and stylistic contexts.
- Demonstrate working knowledge of technologies and equipment applicable to their area(s) of specialization.
- Work independently on a variety of art and/or design problems by combining, as appropriate to the issue, their capabilities in studio, analysis, history and technology.
- Demonstrate competence by the development of a body of work for evaluation in the major area of study.

BFA - Studio Art - 3-D Media *(81 credits)*

- Admission RequirementsArt department allows direct admit to all programs.

Notes

- Students must pass a portfolio review (benchmark) after successful completion of First Year Foundation courses (ART 101, ART 102, ART 103, ART 104, ART 105). Students have two opportunities to pass the portfolio review.
- BFA Studio Art majors must select a concentration at the time of their portfolio review.
- Must have 2.5 overall GPA to graduate.

Program Requirements
First Year Foundations (15 credits): ART 101, ART 102, ART 103, ART 104, ART 105. Second Year Foundations (12 credits): ART 201, ART 202, ART 230, ART 231. Required Studio (18 credits): ART 311 or ART 315, ART 340, ART 350 or ART 351, ART 383, ART 385, ART 389. Concentration (15 credits): Core (9 credits): ART 360, ART 370, ART 381. 3D Media Electives (6 credits): ART 361 (3-6 credits), ART 371 (3-6 credits). Advanced Studies (9 credits): ART 401 (6 credits), ART 402. Art History (3 credits): ART 437.

Electives
Studio electives from the following (6 credits): ART 312, ART 341, ART 352, ART 382, ART 384, ART 386. Art history elective from the following (3 credits): ART 433, ART 434, ART 435, ART 436, ART 438, ART 439.

Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Program Student Learning Outcomes

- Demonstrate functional competency with principles of visual organization, including the ability to work with visual elements in two and three dimensions; color theory and its applications; and drawing.
- Demonstrates perceptual acuity, conceptual understanding and technical facility at a professional entry level in their chosen field(s).
- Analyze works of art/design perceptively and to evaluate them critically.
- Place works of art/design in historical, cultural and stylistic contexts.
- Demonstrate working knowledge of technologies and equipment applicable to their area(s) of specialization.
- Work independently on a variety of art and/or design problems by combining, as appropriate to the issue, their capabilities in studio, analysis, history and technology.
- Demonstrate competence by the development of a body of work for evaluation in the major area of study.

BFA - Studio Art - Integrated Media *(81 credits)*

- Admission RequirementsArt department allows direct admit to all programs.

Notes

- Students must pass a portfolio review (benchmark) after successful completion of First Year Foundation courses (ART 101, ART 102, ART 103, ART 104, ART 105). Students have two opportunities to pass the portfolio review.
- BFA Studio Art majors must select a concentration at the time of their portfolio review.
- Must have 2.5 overall GPA to graduate.

Program Requirements
First Year Foundations (15 credits): ART 101, ART 102, ART 103, ART 104, ART 105. Second Year Foundations (12 credits): ART 201, ART 202, ART 230, ART 231. Required Studio (18 credits): ART 311 or ART 315, ART 340, ART 350 or ART 351, ART 360, ART 370, ART 389. Concentration (18 credits): Core (9 credits): ART 381, ART 383, ART 385. Integrated Media Electives (9 credits): ART 382 (3-6 credits), ART 384 (3-6 credits), ART 386 (3-6 credits). Advanced Studies (9 credits): ART 401 (6 credits), ART 402. Art History (3 credits): ART 437.

Electives
Studio electives from the following (3 credits): ART 312, ART 341, ART 352, ART 361, ART 371. Art history elective from the following (3 credits): ART 433, ART 434, ART 435, ART 436, ART 438, ART 439.

Students fulfill the University's Upper Division

Writing Requirement by successfully completing one of the following courses: ART 433, ART 434, ART 435, ART 436, ART 437, ART 438, ART 439.

Program Student Learning Outcomes

- Demonstrate functional competency with principles of visual organization, including the ability to work with visual elements in two and three dimensions; color theory and its applications; and drawing.
- Demonstrates perceptual acuity, conceptual understanding and technical facility at a professional entry level in their chosen field(s).
- Analyze works of art/design perceptively and to evaluate them critically.
- Place works of art/design in historical, cultural and stylistic contexts.
- Demonstrate working knowledge of technologies and equipment applicable to their area(s) of specialization.
- Work independently on a variety of art and/or design problems by combining, as appropriate to the issue, their capabilities in studio, analysis, history and technology.
- Demonstrate competence by the development of a body of work for evaluation in the major area of study.

Atmospheric & Hydrologic Sciences

Earth Science - BA and Minor

Atmospheric and Hydrologic Sciences

Chairperson: Anthony Hansen
Address: 129 Robert H. Wick Science Building
Phone: 320.308.3260
Email:ahs@stcloudstate.edu
Website:www.stcloudstate.edu/ahs

BA - Earth Science *(49-64 credits)*

Program Requirements

Students must complete a core of required courses and pursue one of the concentrations. Core courses: 25-27 credits (required by all majors): AHS 220, AHS 230, AHS 491, AHS 492; CHEM 210; MATH 115 or both MATH 112 and MATH 113; PHYS 231 or PHYS 234. General Earth Science Concentration (24 additional credits): AHS 260 and 20 credits of AHS electives numbered 300 or above with adviser approval. Environmental Geology Concentration (37-38 additional credits): AHS 307, AHS 322, AHS 325, AHS 332, AHS 336, AHS 423; CHEM 211; ETS 367; GEOG 216, GEOG 316, and 3-4 credits chosen from AHS 334, AHS 438, CHEM 320, ETS 368, ETS 373, ETS 465, ETS 467, GEOG 350, GEOG 416, GEOG 472 with adviser approval.

Electives

AHS 491 and AHS 492 meet the upper division writing requirement.

Program Student Learning Outcomes

- Student will be able to demonstrate technical skills required for the earth science professions.
- Student will be able to demonstrate a knowledge of the earth sciences appropriate to the Bachelor of Arts level.
- Student will be able to communicate earth science information orally and in writing according to professional standards.
- Student will be able to apply scientific reasoning to earth science problems.

Minor - Geology (BA, BS) *(20-23 credits)*

Program Requirements

AHS 220 or AHS 205, AHS 305, AHS 307, AHS 325.

Electives

Select two courses: AHS 322, AHS 332, AHS 423, AHS 424, AHS 425.

Program Student Learning Outcomes

- Student will be able to demonstrate technical skills required for the geologic profession.
- Student will be able to demonstrate a knowledge of geology appropriate to the Bachelor of Science level.
- Student will be able to communicate geologic information orally and in writing according to professional standards.
- Student will be able to apply scientific reasoning to geologic problems.

Hydrology - BS and Minor

Atmospheric and Hydrologic Sciences
Chairperson: Anthony Hansen
Address: 129 Robert H. Wick Science Building
Phone: 320.308.3260
Email: ahs@stcloudstate.edu
Website: www.stcloudstate.edu/ahs

BS - Hydrology *(69 credits)*

Program Requirements

AHS 220, AHS 230, AHS 260, AHS 332, AHS 334, AHS 336, AHS 338, AHS 364, AHS 432, AHS 434, AHS 438, AHS 451, AHS 452; CHEM 210; ETS 362; GEOG 316; MATH 221, MATH 222; PHYS 234, PHYS 235.

Electives

3 credits, numbered 300 or above, with prior advisor approval.

Program Student Learning Outcomes

- Student will demonstrate skills required for hydrology related professions.
- Student will be able to demonstrate knowledge of surface and groundwater hydrology appropriate at the Bachelor of Science level.
- Student will communicate scientific information and ideas orally and in writing according to professional standards.
- Student will be able to apply scientific reasoning to hydrologic problems.

Minor - Hydrology (BA, BS) *(23-24 credits)*

Program Requirements

AHS 220, AHS 230, AHS 260, AHS 332, AHS 334, AHS 336 OR AHS 338

Program Student Learning Outcomes

- Student will demonstrate skills required for hydrology related professions.
- Student will be able to demonstrate knowledge of surface and groundwater hydrology appropriate at the Bachelor of Science level.
- Student will communicate scientific information and ideas orally and in writing according to professional standards.
- Student will be able to apply scientific reasoning to hydrologic problems.

Earth and Space Science Education - BS

Atmospheric and Hydrologic Sciences
Chairperson: Anthony Hansen
Address: 129 Robert H. Wick Science Building
Phone: 320.308.3260
Email: ahs@stcloudstate.edu
Website: www.stcloudstate.edu/ahs

BS - Earth and Space Science/General Science Education, Grades 5-12 *(66-67 credits)*

Admission Requirements

- GPA: 2.50
- C or better in ENGL 191 and CMST 192.
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Satisfactory completion of AHS 205.

Notes

- It is essential to see an advisor during the first semester you are enrolled in science courses.

Program Requirements

5-8 Science Education concentration (42-43): ASTR 106; BIOL 151, BIOL 152; CHEM 210, CHEM 211; AHS 205 or AHS 220; PHYS 231, PHYS 232; SCI 420, SCI 430, SCI 440. 9-12 Earth and Space Science Education concentration (23): AHS 230, AHS 260, AHS 305, AHS 307, AHS 325, AHS 380; ASTR 107.

Electives

3 credits with advisor approval.

Program Student Learning Outcomes

- Student will be able to demonstrate technical skills & knowledge required for the earth science professions and teaching therein.
- Student will be able to demonstrate a knowledge of the earth and space sciences appropriate to the Bachelor of Science level.
- Student will be able to communicate earth and space science content

information orally and in writing according to professional standards.
- Student will be able to apply scientific reasoning to earth and space science problems.

BS - Earth and Space Science Education, Grades 9-12 *(61-62 credits)*

Admission Requirements

- GPA: 2.50
- C or better in ENGL 191 and CMST 192.
- Completion of a minimum of 36 semester hours with at least 12 semester hours in residence at SCSU.
- Submission of scores on the MTLE.

Notes

- It is essential to see an advisor during the first semester you are enrolled in science courses.

Program Requirements

ASTR 106, ASTR 107; BIOL 152; CHEM 210; AHS 205 or AHS 220, AHS 230, AHS 260, AHS 305, AHS 307, AHS 325, AHS 380; SCI 420, SCI 430, SCI 440; PHYS 231, PHYS 232.

Electives

6-9 credits with advisor approval.

Program Student Learning Outcomes

- Student will be able to demonstrate technical skills & knowledge required for the earth science professions and teaching therein.
- Student will be able to demonstrate a knowledge of the earth and space sciences appropriate to the Bachelor of Science level.
- Student will be able to communicate earth and space science content information orally and in writing according to professional standards.
- Student will be able to apply scientific reasoning to earth and space science problems.

Meteorology - BS and Minor

Atmospheric and Hydrologic Sciences

Chairperson: Anthony Hansen
Address: 129 Robert H. Wick Science Building
Phone: 320.308.3260
Email: ahs@stcloudstate.edu
Website: www.stcloudstate.edu/ahs

BS - Meteorology *(78 credits)*

Program Requirements

(72 credits) AHS 160, AHS 230, AHS 260, AHS 275, AHS 280, AHS 364, AHS 365, AHS 367, AHS 368, AHS 375, AHS 385, AHS 465, AHS 467, AHS 475, AHS 478, AHS 481, AHS 482, AHS 486, AHS 491, AHS 492, MATH 221, MATH 222, MATH 320 or PHYS 346, PHYS 234, PHYS 237, CSCI 172, CNA 267.

Electives

6 credits numbered 300 or above with approval of the student's adviser. These may include but are not limited to AHS 334, AHS 338, AHS 387, AHS 420, AHS 444, AHS 485, GEOG 316, MATH 325 or MATH 327.

Satisfied in AHS 491 and AHS 492, the senior project courses.

Program Student Learning Outcomes

- Student will demonstrate technical skills required for meteorology related professions.
- Student will be able to demonstrate knowledge of physical, dynamical, synoptic and mesoscale meteorology appropriate to the Bachelor of Science level.
- Student will communicate scientific information and ideas orally and in writing according to professional standards.
- Student will be able to apply scientific reasoning to meteorological problems.

Minor - Meteorology *(24 credits)*

Program Requirements

AHS 260, AHS 365, AHS 380, AHS 468, MATH 221, PHYS 234.

Electives

Select 3 credits: AHS 364, AHS 375, AHS 385, AHS 420, AHS 465, AHS 475 with the approval of the student's minor advisor.

Program Student Learning Outcomes

- Student will demonstrate technical skills required for meteorology related professions.
- Student will be able to demonstrate knowledge of physical, dynamical, synoptic and mesoscale meteorology appropriate to the Bachelor of Science level.
- Student will communicate scientific information and ideas orally and in writing according to professional standards.
- Student will be able to apply scientific reasoning to meteorological problems.

Environmental Engineering - BS

Atmospheric and Hydrologic Sciences

Chairperson: Anthony Hansen
Address: 129 Robert H. Wick Science Building
Phone: 320.308.3260
Email: ahs@stcloudstate.edu
Website: www.stcloudstate.edu/ahs

BS - Environmental Engineering *(106 credits)*

Admission Requirements

- GPA: 2.50
- Completion of the following with an average GPA of 2.50 or better: ENGL 191, CMST 192, GENG 101, GENG 102, CHEM 210, MATH 221, PHYS 234, ENVE 201

Program Requirements
MATH 221, MATH 222, MATH 320, MATH 327, STAT 353, CHEM 210, CHEM 211, PHYS 234, AHS 220, BIOL 206, GENG 101, GENG 102, MME 201, MME 243, MME 303, AHS 230, AHS 332, AHS 334, AHS 434, ENVE 201, ENVE 202, ENVE 327, ENVE 328, ENVE 426, ENVE 427, ENVE 480, ENVE 481

Electives
9 credits from: CHEM 240, CHEM 241, CHEM 320, CHEM 350, CHEM 440, PHYS 235, AHS 260, BIOL 326, AHS 336, AHS 338, AHS 432, AHS 438, ETS 463, ETS 465, ETS 467, GEOG 316. Students may propose alternative courses with approval of their advisor.

Upper Division Writing requirement satisfied in ENVE 480 and ENVE 481

Biology

Biomedical and Biotechnology BS

Biology

Chairperson: Maureen Tubbiola
Address: 262 Robert H. Wick Science Building
Phone: 320.308.2039
Email:biology@stcloudstate.edu
Website:www.stcloudstate.edu/biology

BS - Biomedical Science *(80 credits)*

Admission Requirements

- GPA: 2.50
- Students must be enrolled (or have completed) BIOL 262.
- C or better in BIOL 151 and BIOL 152

Notes

- It is essential to see a concentration advisor during the first semester you are enrolled in biology courses.
- Students must earn grades of "C" or better in all biology courses to be included in our B.S. major programs.

Program Requirements
BIOL 151, BIOL 152, BIOL 262, BIOL 360, BIOL 362, BIOL 494, CHEM 210, CHEM 211, CHEM 310, CHEM 311, CHEM 480, PHYS 231, PHYS 232, STAT 239 and BIOL 339 (to be taken concurrently).

Electives
23 Credits. See advisor for list of approved electives.

Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses with a 'C' or better: BIOL 456, BIOL 468, BIOL 478, BIOL 482, BIOL 484, or BIOL 494

BS - Biochemistry and Molecular Biology: Biotechnology *(86 credits)*

Admission Requirements

- GPA: 2.5
- Students must be enrolled in (or have completed) BIOL 262
- C or better in BIOL 151 and BIOL 152

Notes

- Students must earn grades of "C" or better in all biology courses.

Program Requirements
(82 credits) BMB 123, BIOL 151, BIOL 152, BIOL 262, BIOL 360, BIOL 362, BIOL 444, BIOL 468, BIOL 472, BIOL 482, BIOL 484. CHEM 210, CHEM 211, CHEM 310, CHEM 311, CHEM 480, CHEM 481. PHYS 231, PHYS 232, MATH 211, MATH 212, STAT 239 and BIOL 339 (to be taken concurrently).

Electives
Select 4 credits: BIOL 466, BIOL 476, BIOL 478, BIOL 486, or other courses approved by advisor.

Students fulfill the University's Upper Division Writing requirement by successfully completing one of the following courses with a "C" or better: BIOL 456, BIOL 468, BIOL 478, BIOL 482, BIOL 484, or BIOL 494.

Program Student Learning Outcomes

- Ability to apply the process of science.
- Ability to communicate and collaborate with other disciplines.
- Ability to tap into the interdisciplinary nature of science.
- Ability to understand the relationship between science and society.
- Ability to use modeling and simulation.
- Ability to use quantitative reasoning; Evolution core concept.
- Integration of information flow, exchange and storage core concept.
- Pathways and transformations of energy and matter core concept.
- Structure and function core concept.
- Systems core concept.

BS - Biology: Biodiversity, Ecology and Evolution *(71-84 credits)*

Notes

- It is essential to see a biology advisor during the first semester you are enrolled in biology courses.

Program Requirements
Core in Biology (33 credits): BIOL 151, BIOL 152, BIOL 222, BIOL 262, BIOL 306, BIOL 308, BIOL 312, BIOL 362, BIOL 456. Chemistry (8 credits): CHEM 210, CHEM 240. Quantitative and Technical courses (10-15 credits): MATH 112, STAT 239 and BIOL 339 (to be taken concurrently), plus two of the following: GEOG 216, GEOG 316, STAT 321, STAT 325, STAT 421, MATH 221, MATH 222, BIOL 466, CSCI 172.

Electives
Select a total of seven courses from the following two elective areas, including at least two courses from each area (20-28 credits). Evolution and Biodiversity elective area: BIOL 314, BIOL 316, BIOL 318, BIOL 322, BIOL 324, BIOL 414, BIOL 420, BIOL 422, BIOL 430, BIOL 434, BIOL 457, BIOL 460, BIOL 465, BIOL 475, GEOG 473. Ecology, Conservation and Management elective area: BIOL 313, BIOL 326, BIOL 418, BIOL 436, BIOL 441, BIOL 442, BIOL 448, BIOL 461, BIOL 491, ETS 367, ETS 368, ETS 465, GEOG 303, GEOG 379. Students can replace one of the seven elective courses with a total of 3 credits from BIOL 444 and BIOL 451.

Students fulfill the University's Upper Division Writing requirement by successfully completing BIOL 456 or BIOL 457 with a 'C' or better.

Program Student Learning Outcomes

- Ability to apply the process of science.
- Ability to communicate and collaborate with other disciplines.
- Ability to tap into the interdisciplinary nature of science.
- Ability to understand the relationship between science and society.
- Ability to use modeling and simulation.
- Ability to use quantitative reasoning; Evolution core concept.
- Integration of information flow, exchange and storage core concept.
- Pathways and transformations of energy and matter core concept.
- Structure and function core concept.
- Systems core concept.

BS - Life Science/General Science Education Grades 5-12 *(63 credits)*

Admission Requirements

- GPA: 2.50
- C or better in BIOL 151, BIOL 152, BIOL 262, ENGL 191, CMST 192. Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission.
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- The courses in this major satisfy 9 credits in Goal Area 3 of the Liberal Education requirement.

Program Requirements

5-8 Science Education Core (43 credits): ASTR 106; BIOL 151, BIOL 152; CHEM 210, CHEM 211; AHS 205; PHYS 231, PHYS 232; SCI 420, SCI 430, SCI 440, STEM 420, STEM 421. 9-12 Life Science Education Emphasis (20 credits): BIOL 202, BIOL 206, BIOL 306 or BIOL 308, BIOL 262, BIOL 312.

Electives

Upper division writing requirement is satisfied by earning a grade of C or better in SCI 420.

Program Student Learning Outcomes

- Ability to apply the process of science.
- Ability to communicate and collaborate with other disciplines.
- Ability to tap into the interdisciplinary nature of science.
- Ability to understand the relationship between science and society.
- Ability to use modeling and simulation.
- Ability to use quantitative reasoning; Evolution core concept.
- Integration of information flow, exchange and storage core concept.
- Pathways and transformations of energy and matter core concept.
- Structure and function core concept.
- Systems core concept.

Biology: Biodiversity, Ecology and Evolution BS

Biology

Chairperson: Maureen Tubbiola
Address: 262 Robert H. Wick Science Building
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BS - Biology: Biodiversity, Ecology and Evolution *(71-84 credits)*

Notes

- It is essential to see a biology advisor during the first semester you are enrolled in biology courses.

Program Requirements

Core in Biology (33 credits): BIOL 151, BIOL 152, BIOL 222, BIOL 262, BIOL 306, BIOL 308, BIOL 312, BIOL 362, BIOL 456. Chemistry (8 credits): CHEM 210, CHEM 240. Quantitative and Technical courses (10-15 credits): MATH 112, STAT 239 and BIOL 339 (to be taken concurrently), plus two of the following: GEOG 216, GEOG 316, STAT 321, STAT 325, STAT 421, MATH 221, MATH 222, BIOL 466, CSCI 172.

Electives

Select a total of seven courses from the following two elective areas, including at least two courses from each area (20-28 credits). Evolution and Biodiversity elective area: BIOL 314, BIOL 316, BIOL 318, BIOL 322, BIOL 324, BIOL 414, BIOL 420, BIOL 422, BIOL 430, BIOL 434, BIOL 457, BIOL 460, BIOL 465, BIOL 475, GEOG 473. Ecology, Conservation and Management elective area: BIOL 313, BIOL 326, BIOL 418, BIOL 436, BIOL 441, BIOL 442, BIOL 448, BIOL 461, BIOL 491, ETS 367, ETS 368, ETS 465, GEOG 303, GEOG 379. Students can replace one of the seven elective courses with a total of 3 credits from BIOL 444 and BIOL 451.

Students fulfill the University's Upper Division Writing requirement by successfully completing BIOL 456 or BIOL 457 with a 'C' or better.

Program Student Learning Outcomes

- Ability to apply the process of science.
- Ability to communicate and collaborate with other disciplines.

- Ability to tap into the interdisciplinary nature of science.
- Ability to understand the relationship between science and society.
- Ability to use modeling and simulation.
- Ability to use quantitative reasoning; Evolution core concept.
- Integration of information flow, exchange and storage core concept.
- Pathways and transformations of energy and matter core concept.
- Structure and function core concept.
- Systems core concept.

Life Sciences BES and Biology Minor

Biology

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BES - Life Sciences *(55-56 credits)*

Notes

- The BES Life Sciences allows students, in conjunction with their advisor, the opportunity to design a specialized major in Biology by careful selection of the 24 elective credits.
- Students must earn grades of "C" or better in all biology courses to be included in the B.E.S. major program.
- It is essential to see a Biology faculty advisor during the first semester you are enrolled in biology courses.

Program Requirements
31-32 Credits: BIOL 151, BIOL 152, BIOL 262, CHEM 210, CHEM 240, CHEM 211 or CHEM 241, STAT 239, BIOL 339, and one of BIOL 456, BIOL 457, or BIOL 494

Electives
24 additional credits in Biology at the 200-level or above. At least 15 credits must be completed at SCSU.

Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses with a 'C' or better: BIOL 456, BIOL 457, or BIOL 494.

Minor - Biology *(24-25 credits)*

Notes

- Students must earn grades of "C" or better in all biology courses to be included in our B.S. major or minor programs.

Program Requirements
12-13 credits: BIOL 151, BIOL 152, and one of CHEM 151 or CHEM 160 or CHEM 210.

Electives
12 credits of Biology courses at the 200-level or higher. Courses must be approved by advisor.

Program Student Learning Outcomes

- Ability to apply the process of science.
- Ability to communicate and collaborate with other disciplines.
- Ability to tap into the interdisciplinary nature of science.
- Ability to understand the relationship between science and society.
- Ability to use modeling and simulation.
- Ability to use quantitative reasoning; Evolution core concept.
- Integration of information flow, exchange and storage core concept.
- Pathways and transformations of energy and matter core concept.
- Structure and function core concept.
- Systems core concept.

Life Science Education BS

Biology

Chairperson: Maureen Tubbiola
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BS - Life Science/General Science Education Grades 5-12 *(63 credits)*

Admission Requirements

- GPA: 2.50
- C or better in BIOL 151, BIOL 152, BIOL 262, ENGL 191, CMST 192. Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission.
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- The courses in this major satisfy 9 credits in Goal Area 3 of the Liberal Education requirement.

Program Requirements
5-8 Science Education Core (43 credits): ASTR 106; BIOL 151, BIOL 152; CHEM 210, CHEM 211; AHS 205; PHYS 231, PHYS 232; SCI 420, SCI 430, SCI 440, STEM 420, STEM 421. 9-12 Life Science Education Emphasis (20 credits): BIOL 202, BIOL 206, BIOL 306 or BIOL 308, BIOL 262, BIOL 312.

Electives
Upper division writing requirement is satisfied by earning a grade of C or better in SCI 420.

Program Student Learning Outcomes

- Ability to apply the process of science.
- Ability to communicate and collaborate with other disciplines.
- Ability to tap into the interdisciplinary nature of science.
- Ability to understand the relationship between science and society.
- Ability to use modeling and simulation.
- Ability to use quantitative reasoning; Evolution core concept.
- Integration of information flow, exchange and storage core concept.
- Pathways and transformations of energy and matter core concept.
- Structure and function core concept.
- Systems core concept.

BS - Life Science Education Grades 9-12 *(65 credits)*

Admission Requirements

- GPA: 2.50
- C or better in BIOL 151, BIOL 152, BIOL 262, ENGL 191, CMST 192. Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission.
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- The courses in the major satisfy 8 credits of Goal Area 3 of the liberal education requirement.

Program Requirements
BIOL 151, BIOL 152, BIOL 202, BIOL 206, BIOL 262, BIOL 306, BIOL 308, BIOL 312; CHEM 210, CHEM 211; SCI 420, SCI 430, SCI 440, STEM 420, STEM 421.

Electives
8 credits of approved Biology electives.

Upper division writing requirement is satisfied by earning a grade of C or better in SCI 420.

Program Student Learning Outcomes

- Ability to apply the process of science.
- Ability to communicate and collaborate with other disciplines.
- Ability to tap into the interdisciplinary nature of science.
- Ability to understand the relationship between science and society.
- Ability to use modeling and simulation.
- Ability to use quantitative reasoning; Evolution core concept.
- Integration of information flow, exchange and storage core concept.
- Pathways and transformations of energy and matter core concept.
- Structure and function core concept.
- Systems core concept.

Biological Sciences MA and MS

Biology

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MA - Biological Sciences - Cell and Molecular *(36 credits)*

- Admission RequirementsThe GRE with a minimum of 150 on both verbal and quantitative sections is required for admittance to the program. Previous GRE scores may be submitted.
- Successsful completion of a minimum of 32 undergraduate credits in biology and 8 credits in chemistry.

Notes

- In some cases it may be necessary for the student to complete additional prerequisite undergraduate work.

Plan B
Option(s): Comprehensive Exam
Credits: 36
Core: (11 credits) BIOL 610 (must be taken for 3 credits, may be repeated, maximum of 8 credits), BIOL 628, BIOL 630 (must be taken for 3 or 4 times), 600-level statistics course approved by advisor.
Electives: Remaining credits selected from the following with advisor approval: BIOL 553, BIOL 555, BIOL 556, BIOL 557, BIOL 558, BIOL 560, BIOL 562, BIOL 564, BIOL 566, BIOL 568, BIOL 572, BIOL 574, BIOL 576, BIOL 577, BIOL 578, BIOL 580, BIOL 582, BIOL 584, BIOL 590, BIOL 601, BIOL 603, BIOL 650, BIOL 652, BIOL 666, BIOL 668, BIOL 670, BIOL 672, BIOL 674, BIOL 680, BIOL 678.
Research:

Program Student Learning Outcomes

- Graduates will be prepared for additional advanced study if they wish to continue beyond the Master's degree.
- Graduates will be prepared to perform as professional biologists in a number of work settings (e.g., health care, government, business, education, research, etc.).
- Graduate students will analyze experimental and/or observational results and draw appropriate conclusions from laboratory or field experiences.
- Graduate students will demonstrate content knowledge of the primary literature.
- Graduate students will present scientific content (e.g., graduate seminars, lectures, poster sessions).
- Thesis option graduate students will design and implement a formal research proposal and project.
- Thesis option graduate students will organize and write the results of original research consistent with requirements of current biological literature, and non-thesis graduate students will take an exit exam demonstrating knowledge of current biological literature.
- Graduate Research Oral Presentation Rubric.
- Graduate Research Paper Rubric.
- Graduate Thesis Defense Rubric; Graduate Thesis Proposal Rubric.

MA - Biological Science - Ecology and Natural Resources *(36 credits)*

- Admission RequirementsThe GRE with a minimum of 150 on both verbal and quantitative sections is required for admittance to the program. Previous GRE scores may be submitted.
- Successful completion of a minimum of 12 undergraduate credits in chemistry.

Notes

- In some cases it may be necessary for the student to complete additional prerequisite undergraduate work.

Plan B
Option(s): Comprehensive Exam
Credits: 36
Core: (11 credits) BIOL 610 (must be taken for 3 credits, may be repeated, maximum of 8 credits),

BIOL 628, BIOL 630 (must be taken 3 or 4 times), 600-level statistics course approved by advisor.
Electives: Remaining credits selected from the following with advisor approval: BIOL 514, BIOL 518, BIOL 520, BIOL 522, BIOL 530, BIOL 534, BIOL 536, BIOL 538, BIOL 540, BIOL 541, BIOL 542, BIOL 546, BIOL 553, BIOL 555, BIOL 556, BIOL 557, BIOL 560, BIOL 572, BIOL 590, BIOL 601, BIOL 603, BIOL 632, BIOL 633, BIOL 634, BIOL 635, BIOL 636, BIOL 637, BIOL 650, BIOL 652, BIOL 678.
Research:

Program Student Learning Outcomes

- Graduates will be prepared for additional advanced study if they wish to continue beyond the Master's degree.
- Graduates will be prepared to perform as professional biologists in a number of work settings (e.g., health care, government, business, education, research, etc.).
- Graduate students will analyze experimental and/or observational results and draw appropriate conclusions from laboratory or field experiences.
- Graduate students will demonstrate content knowledge of the primary literature.
- Graduate students will present scientific content (e.g., graduate seminars, lectures, poster sessions).
- Thesis option graduate students will design and implement a formal research proposal and project.
- Thesis option graduate students will organize and write the results of original research consistent with requirements of current biological literature, and non-thesis graduate students will take an exit exam demonstrating knowledge of current biological literature.
- Graduate Research Oral Presentation Rubric.
- Graduate Research Paper Rubric.
- Graduate Thesis Defense Rubric; Graduate Thesis Proposal Rubric.

MS - Biological Sciences - Cell and Molecular *(30 credits)*

- Admission RequirementsThe GRE with a minimum of 150 on both verbal and quantitative sections is required for admittance to the program. Previous GRE scores may be submitted.
- Successful completion of a minimum of 32 undergraduate credits in biology and 8 credits in chemistry.

Notes

- All prospective students should contact a faculty member within the department to discuss research interests and opportunities to find and identify a research mentor willing to sponsor them on a research project.
- In some cases it may be necessary for the student to complete additional prerequisite undergraduate work.

Plan A
Option(s): Thesis
Credits: 30
Core: Minimum of 11 credits: BIOL 610 (must be taken for 3 credits, may be repeated for a maximum of 8 credits), BIOL 628, BIOL 630 (must be taken 3 or 4 times), 600-level statistics course approved by advisor.
Electives: Remaining credits selected from the following with advisor approval: BIOL 553, BIOL 555, BIOL 556, BIOL 557, BIOL 558, BIOL 560, BIOL 562, BIOL 564, BIOL 566, BIOL 568, BIOL 572, BIOL 574, BIOL 576, BIOL 577, BIOL 578, BIOL 580, BIOL 582, BIOL 584, BIOL 590, BIOL 601, BIOL 603, BIOL 650, BIOL 652, BIOL 666, BIOL 668, BIOL 670, BIOL 672, BIOL 674, BIOL 680, BIOL 678.
Research: 6 credits: BIOL 699

Program Student Learning Outcomes

- Graduates will be prepared for additional advanced study if they wish to continue beyond the Master's degree.
- Graduates will be prepared to perform as professional biologists in a number of work settings (e.g., health care, government, business, education, research, etc.).
- Graduate students will analyze experimental and/or observational

results and draw appropriate conclusions from laboratory or field experiences.
- Graduate students will demonstrate content knowledge of the primary literature.
- Graduate students will present scientific content (e.g., graduate seminars, lectures, poster sessions).
- Thesis option graduate students will design and implement a formal research proposal and project.
- Thesis option graduate students will organize and write the results of original research consistent with requirements of current biological literature, and non-thesis graduate students will take an exit exam demonstrating knowledge of current biological literature.
- Graduate Research Oral Presentation Rubric
- Graduate Research Paper Rubric
- Graduate Thesis Defense Rubric; Graduate Thesis Proposal Rubric.

MS - Biological Sciences - Ecology and Natural Resources *(30 credits)*

- Admission RequirementsThe GRE with a minimum of 150 on both verbal and quantitative sections is required for admittance to the program. Previous GRE scores may be submitted.
- Successful completion of a minimum of 12 undergraduate credits in chemistry.

Notes

- All prospective students should contact a faculty member within the department to discuss research interests and opportunities to find and identify a research mentor willing to sponsor them on a research project.
- In some cases it may be necessary for the student to complete additional prerequisite undergraduate work.

Plan A
Option(s): Thesis
Credits: 30
Core: Minimum of 11 credits: BIOL 610 (must be taken for 3 credits, may be repeated for a maximum of 8 credits), BIOL 628, BIOL 630 (must be taken 3 or 4 times), 600-level statistics course approved by advisor.
Electives: Remaining credits selected from the following with advisor approval: BIOL 514, BIOL 518, BIOL 520, BIOL 522, BIOL 530, BIOL 534, BIOL 536, BIOL 538, BIOL 540, BIOL 541, BIOL 542, BIOL 546, BIOL 553, BIOL 555, BIOL 556, BIOL 557, BIOL 560, BIOL 572, BIOL 590, BIOL 601, BIOL 603, BIOL 632, BIOL 633, BIOL 634, BIOL 635, BIOL 636, BIOL 637, BIOL 650, BIOL 652, BIOL 678.
Research: 6 credits: BIOL 699

Program Student Learning Outcomes

- Graduates will be prepared for additional advanced study if they wish to continue beyond the Master's degree.
- Graduates will be prepared to perform as professional biologists in a number of work settings (e.g., health care, government, business, education, research, etc.).
- Graduate students will analyze experimental and/or observational results and draw appropriate conclusions from laboratory or field experiences.
- Graduate students will demonstrate content knowledge of the primary literature.
- Graduate students will present scientific content (e.g., graduate seminars, lectures, poster sessions).
- Thesis option graduate students will design and implement a formal research proposal and project.
- Thesis option graduate students will organize and write the results of original research consistent with requirements of current biological literature, and non-thesis graduate students will take an exit exam demonstrating knowledge of current biological literature.
- Graduate Research Oral Presentation Rubric
- Graduate Research Paper Rubric
- Graduate Thesis Defense Rubric; Graduate Thesis Proposal Rubric.

Chemistry and Biochemistry

Chemistry BS and Minor

Chemistry and Biochemistry

Interim Chairperson: Michael Jeannot
Address: 358 Robert H. Wick Science Building
Phone: 320.308.3031
Email:chemistry@stcloudstate.edu
Website:www.stcloudstate.edu/chemistry

BS - Chemistry (ACS Approved) *(71-86 credits)*

Admission Requirements

- GPA: 2.0

Program Requirements

(71 credits) CHEM 210, CHEM 211, CHEM 310, CHEM 311, CHEM 350, CHEM 391, CHEM 420, CHEM 421, CHEM 422, CHEM 423, CHEM 430, CHEM 431, CHEM 450, CHEM 480, CHEM 489 (2x for 1 credit each) or CHEM 444 (2 credits), CHEM 491; MATH 221, MATH 222; PHYS 234, PHYS 235.

Electives

Select 3 credits: CHEM 320 or CHEM 440, CHEM 444, CHEM 452, CHEM 453, CHEM 460-469, CHEM 481, CHEM 489, CHEM 490, MATS 411, MATS 412, MATS 414.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CHEM 391 and CHEM 491.

Program Student Learning Outcomes

- Students will be able to communicate ideas and processes of chemistry, clearly and precisely, both orally and in writing.
- Students will demonstrate the processes and skills associated with chemistry research, including an integrated working knowledge of instrumentation and chemical processes. This will occur through participation in a research project as part of an upper-level chemistry course and/or as part of an individual research experience.
- Students will demonstrate general knowledge of the basic areas of chemistry that is appropriate for each successive chemistry course. This content will allow them to continue in successive chemistry courses, as well as relate the knowledge to real-world situations.
- Content goals will be identified for each course, and be agreed upon by all faculty teaching the course.
- Students will demonstrate basic laboratory skills appropriate to each chemistry course.
- Appropriate laboratory skills will be identified for each course, and be agreed upon by all faculty teaching the course.

BS - Biochemistry and Molecular Biology: Biochemistry *(77-81 credits)*

Admission Requirements

- GPA: 2.0
- A grade of "C-" or better in CHEM 311.

Notes

- All students majoring in chemistry must successfully complete CHEM 391 and CHEM 491. Normally, students register for CHEM 391 in the spring semester of the junior year, and CHEM 491 in the spring semester of the senior year.

Program Requirements

BMB 123, CHEM 210, CHEM 211, CHEM 310, CHEM 311, CHEM 350, CHEM 391, CHEM 450, CHEM 480, CHEM 481, CHEM 491, BIOL 151, BIOL 152, BIOL 262, and BIOL 360. One of the following: CHEM 420 or CHEM 482. One of the following: BIOL 362 or BIOL 476 or BIOL 486. One pair of the following: MATH 211 and MATH 212 or MATH 221 and MATH 222. One pair of the following: PHYS 231 and PHYS 232 or PHYS 234 and PHYS 235.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing CHEM 391 and CHEM 491.

Program Student Learning Outcomes

- Students will be able to communicate ideas and processes of chemistry, clearly and precisely, both orally and in writing.
- Students will demonstrate the processes and skills associated with chemistry

research, including an integrated working knowledge of instrumentation and chemical processes. This will occur through participation in a research project as part of an upper-level chemistry course and/or as part of an individual research experience.
- Students will demonstrate general knowledge of the basic areas of chemistry that is appropriate for each successive chemistry course. This content will allow them to continue in successive chemistry courses, as well as relate the knowledge to real-world situations.
- Content goals will be identified for each course, and be agreed upon by all faculty teaching the course.
- Students will demonstrate basic laboratory skills appropriate to each chemistry course.
- Appropriate laboratory skills will be identified for each course, and be agreed upon by all faculty teaching the course.

Minor - Chemistry *(27-28 credits)*

Program Requirements

(20-21 credits) CHEM 210, CHEM 211, CHEM 240 or CHEM 310, CHEM 241 or CHEM 311, CHEM 350.

Electives

7 CHEM or MATS credits at the 300-400 level, excluding CHEM 391, CHEM 444, CHEM 489, CHEM 490, CHEM 491.

Chemistry Concentrations BS

Chemistry and Biochemistry

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BS - Chemistry - Biochemistry Concentration (ACS Approved) *(86 credits)*

Admission Requirements

- GPA: 2.0

Program Requirements

CHEM 210, CHEM 211, CHEM 310, CHEM 311, CHEM 350, CHEM 391, CHEM 420, CHEM 421, CHEM 422, CHEM 423, CHEM 430, CHEM 450, CHEM 480, CHEM 481, CHEM 489 (2 credits) or CHEM 444 (2 credits), CHEM 491; MATH 221, MATH 222; PHYS 234, PHYS 235; BIOL 151, BIOL 152, BIOL 262, BIOL 360. Completion of these courses satisfies the requirements for approval by the American Chemical Society.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing CHEM 391 and CHEM 491.

Program Student Learning Outcomes

- Students will be able to communicate ideas and processes of chemistry, clearly and precisely, both orally and in writing.
- Students will demonstrate the processes and skills associated with chemistry research, including an integrated working knowledge of instrumentation and chemical processes. This will occur through participation in a research project as part of an upper-level chemistry course and/or as part of an individual research experience.
- Students will demonstrate general knowledge of the basic areas of chemistry that is appropriate for each successive chemistry course. This content will allow them to continue in successive chemistry courses, as well as relate the knowledge to real-world situations.
- Content goals will be identified for each course, and be agreed upon by all faculty teaching the course.
- Students will demonstrate basic laboratory skills appropriate to each chemistry course.
- Appropriate laboratory skills will be identified for each course, and be agreed upon by all faculty teaching the course.

BS - Chemistry - Chemical Physics Concentration (ACS Approved) *(77 credits)*

Admission Requirements

- GPA: 2.0

Program Requirements
CHEM 210, CHEM 211, CHEM 310, CHEM 311, CHEM 350, CHEM 391, CHEM 420, CHEM 421, CHEM 422, CHEM 423, CHEM 430, CHEM 431, CHEM 450, CHEM 480, CHEM 489 (2 credits) or CHEM 444 (2 credits.), CHEM 491; MATH 221, MATH 222; PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 346. Completion of these courses satisfies the requirements for approval by the American Chemical Society.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing CHEM 391 and CHEM 491.

Program Student Learning Outcomes

- Students will be able to communicate ideas and processes of chemistry, clearly and precisely, both orally and in writing.
- Students will demonstrate the processes and skills associated with chemistry research, including an integrated working knowledge of instrumentation and chemical processes. This will occur through participation in a research project as part of an upper-level chemistry course and/or as part of an individual research experience.
- Students will demonstrate general knowledge of the basic areas of chemistry that is appropriate for each successive chemistry course. This content will allow them to continue in successive chemistry courses, as well as relate the knowledge to real-world situations.
- Content goals will be identified for each course, and be agreed upon by all faculty teaching the course.
- Students will demonstrate basic laboratory skills appropriate to each chemistry course.
- Appropriate laboratory skills will be identified for each course, and be agreed upon by all faculty teaching the course.

BS - Chemistry - Environmental Chemistry Concentration (ACS Approved) *(78 credits)*

Admission Requirements

- GPA: 2.0

Program Requirements
CHEM 210, CHEM 211, CHEM 310, CHEM 311, CHEM 350, CHEM 391, CHEM 420, CHEM 421, CHEM 422, CHEM 423, CHEM 430, CHEM 431, CHEM 320 or CHEM 440, CHEM 450, CHEM 480, CHEM 489 (2 credits) or CHEM 444 (2 credits), CHEM 491; MATH 221, MATH 222; PHYS 234, PHYS 235; AHS 220, ETS 375. Completion of these courses satisfies the requirements for approval by the American Chemical Society.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing CHEM 391 and CHEM 491.

Program Student Learning Outcomes

- Students will be able to communicate ideas and processes of chemistry, clearly and precisely, both orally and in writing.
- Students will demonstrate the processes and skills associated with chemistry research, including an integrated working knowledge of instrumentation and chemical processes. This will occur through participation in a research project as part of an upper-level chemistry course and/or as part of an individual research experience.
- Students will demonstrate general knowledge of the basic areas of chemistry that is appropriate for each successive chemistry course. This content will allow them to continue in successive chemistry courses, as well as relate the knowledge to real-world situations.
- Content goals will be identified for each course, and be agreed upon by all faculty teaching the course.
- Students will demonstrate basic laboratory skills appropriate to each chemistry course.

- Appropriate laboratory skills will be identified for each course, and be agreed upon by all faculty teaching the course.

Chemistry: Science Education BS

Chemistry and Biochemistry

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BS - Chemistry/General Science Education 5-12 *(67 credits)*

Admission Requirements

- GPA: 2.75
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence of SCSU.
- C or better in ENGL 191 and CMST 192.
- Must participate in a STEM Education Admissions Event to assess student skills in writing and oral communication as well as student dispositions.

Notes

- The Liberal Education Program (LEP) incorporates the ten goals of the Minnesota Transfer Curriculum. LEP must be satisfied by completion of all ten goals and achieve a total of at least 40 credits. Completion of major courses satisfies 8 credits from goal area 3 and 3 credits from goal area 4.
- ED 431, IM 422, STEM 420 and SCI 420 are co-requisites. ED 421, ED 451, STEM 421 and SCI 430 are co-requisites.

Program Requirements

5-8 Science Education Component (43 credits). ASTR 106; BIOL 151, BIOL 152; CHEM 210, CHEM 211; AHS 205; PHYS 231, PHYS 232; SCI 420; SCI 430; SCI 440; STEM 420; STEM 421. 9-12 Chemistry Education Component (24 credits). CHEM 310; CHEM 311; CHEM 350; CHEM 420; CHEM 489 (1 credit); MATH 211, MATH 212.

Electives

Upper division writing requirement is satisfied by earning a grade of C or better in SCI 420.

Program Student Learning Outcomes

- Students will be able to communicate ideas and processes of chemistry, clearly and precisely, both orally and in writing.
- Students will demonstrate the processes and skills associated with chemistry research, including an integrated working knowledge of instrumentation and chemical processes. This will occur through participation in a research project as part of an upper-level chemistry course and/or as part of an individual research experience.
- Students will demonstrate the processes and skills associated with chemistry research, including an integrated working knowledge of instrumentation and chemical processes. This will occur through participation in a research project as part of an upper-level chemistry course and/or as part of an individual research experience.
- Content goals will be identified for each course, and be agreed upon by all faculty teaching the course.
- Students will demonstrate basic laboratory skills appropriate to each chemistry course.
- Appropriate laboratory skills will be identified for each course, and be agreed upon by all faculty teaching the course.

BS - Chemistry/General Science Education 9-12 *(63 credits)*

Admission Requirements

- GPA: 2.75
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence of SCSU.
- C or better in ENGL 191 and CMST 192.
- Must participate in a STEM Education Admissions Event to assess student skills in writing and oral communication as well as student dispositions.

Notes

- The Liberal Education Program (LEP) incorporates the ten goals of the Minnesota Transfer Curriculum. LEP must be satisfied by completion of all ten goals and achieve a total of at least 40 credits. Completion of major courses satisfies 8 credits from goal area 3 and 3 credits from goal area 4.
- ED 431, IM 422, STEM 420 and SCI 420 are co-requisites. ED 421, ED 451, STEM 421 and SCI 430 are co-requisites.

Program Requirements
(51 credits) CHEM 210, CHEM 211, CHEM 310, CHEM 311, CHEM 350, CHEM 420, CHEM 480, CHEM 489 (1 credit), MATH 211, MATH 212; PHYS 231, PHYS 232; SCI 420, SCI 430, SCI 440, STEM 420, STEM 421.

Electives
8 CHEM credits at the 300 or 400 level must be approved by Chemistry advisor.

Upper division writing requirement is satisfied by earning a grade of C or better in SCI 420.

Program Student Learning Outcomes

- Students will be able to communicate ideas and processes of chemistry, clearly and precisely, both orally and in writing.
- Students will demonstrate the processes and skills associated with chemistry research, including an integrated working knowledge of instrumentation and chemical processes. This will occur through participation in a research project as part of an upper-level chemistry course and/or as part of an individual research experience.
- Students will demonstrate general knowledge of the basic areas of chemistry that is appropriate for each successive chemistry course. This content will allow them to continue in successive chemistry courses, as well as relate the knowledge to real-world situations.
- Content goals will be identified for each course, and be agreed upon by all faculty teaching the course.
- Students will demonstrate basic laboratory skills appropriate to each chemistry course.
- Appropriate laboratory skills will be identified for each course, and be agreed upon by all faculty teaching the course.

Forensic Science Minor

Forensic Science

Interim Chairperson: Michael Jeannot
Address: 358 Robert H. Wick Science Building
Phone: 320.308.3031
Email:chemistry@stcloudstate.edu
Website:www.stcloudstate.edu/chemistry

Minor - Forensic Science *(25 credits)*

Notes

- The minor in Forensic Science is offered jointly by the Chemistry, Anthropology, and Criminal Justice departments.

Program Requirements
CHEM 207, CHEM 307, ANTH 447, CJS 489, PESS 249.

Electives
At least 10 credits (300 and/or 400 level) taken with the approval of minor program advisor.

Program Student Learning Outcomes

- Students will demonstrate general knowledge of the basic areas of chemistry that is appropriate for each successive chemistry course. This content will allow them to continue in successive chemistry courses, as well as relate the knowledge to real-world situations.
- Content goals will be identified for each course, and be agreed upon by all faculty teaching the course.
- Students will demonstrate basic laboratory skills appropriate to each chemistry course.

Material Science and Instrumentation M.S.

Chemistry and Biochemistry

Interim Chairperson: Michael Jeannot
Address: 358 Robert H. Wick Science Building
Phone: 320.308.3031
Email:chemistry@stcloudstate.edu
Website:www.stcloudstate.edu

Professional Science Masters - Material Science and Instrumentation *(33 credits)*

- Admission RequirementsStudent must hold a B.S. or B.A. degree in science, engineering, or a related field.

Notes

- See department website (http://www.stcloudstate.edu/graduate/psm-msi/) for more information about the program.

Plan B
Option(s): Capstone
Credits: 33
Core: 15 credits: MATS 511, MATS 512, MATS 514, MATS 621, MATS 695. Also select 9 credits from: ACCT 591, COMM 571, MBA 663, MBA 683, PHIL 581, PHIL 584.
Electives: Select 9 credits from: MATS 615, MATS 623, MATS 625, MATS 631, MATS 641.
Research:

Child & Family Studies

BS and Minor

Child and Family Studies
Chairperson: JoAnn Johnson
Address: B109 Education Building
Phone: 320.308.2132
Email:cfs@stcloudstate.edu
Website:www.stcloudstate.edu/cfs

BS - Early Childhood Education *(79 credits)*
Admission Requirements

- GPA: 2.75
- See department website for admission process/transition points.

Program Requirements
Foundation (17 credits). ED 200 or CFS 200, CFS 315, HLTH 301, HURL 497, IM 423, MATH 301. Early Education I (18 credits): CFS 220 or CFS 260, CFS 421, CFS 431, CFS 422, CFS 443. Early Education II (17 credits): CFS 406, CFS 413, CFS 408, CFS 428 or ED 428, SCI 226, PESS 388. Final Year (27 credits): CFS 423, CFS 433, CFS 460 (6 Cr.), ED 417, ED 418, ED 419, ED 420 (6 Cr.)

Electives
The Upper Division Writing Requirement (University's Upper Division Writing Requirement) is initiated in CFS 423 and completed in CFS 460.

Program Student Learning Outcomes

- Understand child development and learning.
- Plans, designs, and implements developmentally appropriate learning experiences for Infants and Toddlers, Pre-primary, and Young Children.
- Establishes and maintains positive, collaborative relationships with families.

Minor - Early Childhood Education-BES *(23 credits)*
Admission Requirements

- GPA: 2.50

Notes

- The Department of Child and Family Studies offers a 23 credit minor that does not result in a teaching license. To be admitted to the minor program, students must have a 2.5 GPA. The Child and Family Studies minor serves as an excellent complement to major fields such as Community Psychology, Psychology, Social Work and Bachelor of Elective Studies.

Program Requirements
CFS 421, CFS 431, CFS 422, CFS 220, CFS 260.

Electives
8 credits: ED 374, CSD 468, CPSY 428, PSY 441, CFS 413, CFS 443, and CFS 406

Minor - Early Childhood Education *(23 credits)*

Admission Requirements

- GPA: 2.50

Notes

- The Department of Child and Family Studies offers a 23 credit minor that does not result in a teaching license. To be admitted to the minor program, students must have a 2.5 GPA. The Child and Family Studies minor serves as an excellent complement to majors in Special Education, Community Psychology, Psychology, Social Work and Elementary Education.

Program Requirements
CFS 421, CFS 431, CFS 422, CFS 220, CFS 260

Electives
8 credits: ED 374, CSD 468, CPSY 428, PSY 441, CFS 413, CFS 443, and CFS 406 or as approved by CFS minor advisor

Program Student Learning Outcomes

- Understand child development and learning.
- Plans, designs, and implements developmentally appropriate learning experiences for Infants and Toddlers, Pre-primary, and Young Children.
- Establishes and maintains positive, collaborative relationships with families.

MS

Child and Family Studies

Chairperson: JoAnn Johnson
Address: B109 Education Building
Phone: 320.308.2132
Email:cfs@stcloudstate.edu
Website:www.stcloudstate.edu/cfs

MS - Early Childhood Special Education Studies *(32-36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- Complete Graduate Studies application process with three references and an essay.

Notes

- Admission decisions are made throughout the year as completed application files are received. A student may start the program fall, spring and summer terms.

Plan A
Option(s): Thesis
Credits: 32
Core: 18 credits: CFS 505, CFS 506, CFS 513, CFS 515, CFS 521, CFS 522, CFS 560, CFS 605, CFS 608, CFS 611, CFS 623, CFS 625, CFS 626, CFS 627, CFS 631, CFS 632, CFS 633, CFS 635, CFS 636, CFS 643, CFS 645, CFS 653, CFS 661. NOTE: A minimum of half of a graduate program's credits must be at the 600-level.
Electives: Special Needs Specialization Block Courses (8 credits): SPED 503, SPED 505, SPED 647, ED 620, CFS 680, CFS 681. Additional courses may be needed for teaching licensure; contact your advisor.
Research: 6-9 credits: ED 615, CFS 621, CEEP 678, CFS 699

Plan B
Option(s): Starred Paper(s)
Credits: 36
Core: (21 Credits) Select from: CFS 505, CFS 506, CFS 513, CFS 515, CFS 521, CFS 522, CFS 560, CFS 605, CFS 608, CFS 611, CFS 623, CFS 625, CFS 626, CFS 627, CFS 631, CFS 632, CFS 633, CFS 635, CFS 636, CFS 643, CFS 645. NOTE: A minimum of half of a graduate program's credits must be at the 600-level.
Electives: (12 credits) Special Needs Specialization Block Courses, select from: SPED 503, SPED 505, SPED 647, ED 620, CFS 680, CFS 681. Additional courses may be needed for teaching licensure, contact your advisor.
Research: 3-9 Credits: ED 615, CFS 621, CEEP 678

Program Student Learning Outcomes

- Understands the central concepts, tools of inquiry, and history and context of developmental delays and disabilities

and medical conditions as a foundation on which to base practice.
- Understands referral, assessment, planning, and placement practices specific to teaching children from birth through age six who exhibit a broad range of developmental delays or disabilities or medical complications.
- Understands how to use individual family services plans and individual education program plans to design and implement developmentally appropriate instruction for young children with developmental delays or disabilities or medical conditions.
- Communicates and interacts with students, families, other teachers and the community to support student learning and well-being.
- Applies the standards of effective practice in teaching children with developmental delays or disabilities or medical conditions through a variety of early and ongoing clinical experiences with infants, toddlers, and preprimary children across a range of service delivery models.

MS - Child and Family Studies: Family Studies *(32-36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- Complete Graduate Studies application process with three references and an essay.

Notes

- Admission decisions are made throughout the year as completed application files are received. A student may start the program fall, spring and summer terms. NOTE: Students must also meet other state requirements for teacher licensure, as needed, based on their undergraduate coursework.

Plan A

Option(s): Thesis
Credits: 32
Core: 18 credits: CFS 505, CFS 515, CFS 521, CFS 522, CFS 605, CFS 625, CFS 631, CFS 635, CFS 645, CFS 665, CFS 666, CFS 675. NOTE: A minimum of half of a graduate program's credits must be at the 600-level.
Electives: Family Studies Specialization Block (8 credits): CFS 626, CFS 627, CFS 632, CFS 636, CFS 646, CFS 654, CFS 655. Additional courses may be used for this block with permission of the advisor. Additional courses may be needed for teaching licensure, contact your advisor.
Research: 6-9 credits: ED 615, CEEP 678, CFS 621, CFS 699

Plan B

Option(s): Starred Paper(s)
Credits: 36
Core: (21 Credits) Select from: CFS 505, CFS 515, CFS 521, CFS 522, CFS 605, CFS 625, CFS 631, CFS 635, CFS 645, CFS 665, CFS 666, CFS 675. NOTE: A minimum of half of a graduate program's credits must be at the 600-level.
Electives: Family Studies Specialization Block (12 credits), select from: CFS 626, CFS 627, CFS 632, CFS 636, CFS 646, CFS 654, CFS 655. Additional courses may be used for this block with permission of the advisor. Additional courses may be needed for teaching licensure, contact your advisor.
Research: 3-9 Credits: ED 615, CEEP 678, CFS 621

Program Student Learning Outcomes

- Understand child development and learning.
- Plans, designs, and implements developmentally appropriate learning experiences for Infants and Toddlers, Pre-primary, and Young Children.
- Establishes and maintains positive, collaborative relationships with families.

Certificates

Child and Family Studies

Chairperson: JoAnn Johnson
Address: B109 Education Building
Phone: 320.308.2132
Email:cfs@stcloudstate.edu
Website:www.stcloudstate.edu/cfs

Certificate - Parent Education *(29-34 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- Complete Graduate Studies application with three recommendations and an essay.

Notes

- Courses are available that lead to eligibility for licensure in early childhood special education and parent education. It is possible to combine course work and to receive more than one license. It is the students' responsibility to consult with the child and family studies department and state licensing agencies for current licensing requirements.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate. Child Development: CFS 521, CFS 631. Family Development: CFS 515, CFS 522. Parent Education Methods: CFS 625, CFS 665, CFS 635, CFS 645, CFS 666. Student Teaching: CFS 675. For students with non-teaching degree: HURL 597, HLTH 505.

Electives

Students must complete 6 credits in this area. Previous course work in education, child psychology or family studies may be accepted to meet this licensure requirement. Consult with the Parent Education Program Coordinator to find out which courses can be counted as electives.

Certificate - Early Childhood Special Education *(30 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required for graduate admission consideration to licensure programs. A minimum of 30 credits is required, about one-third of which must be taken at the graduate level.

Notes

- Courses are available that lead to eligibility for licensure in early childhood special education and parent education. It is possible to combine course work and to receive more than one license. It is the students' responsibility to consult with the child and family studies department and state licensing agencies for current licensing requirements.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate. Foundations, CFS 611, CFS 521, CFS 631, CFS 633, CFS 643, CFS 506. Family, CFS 632. Special Needs, CFS 608, SPED 505, SPED 520, CFS 680, CFS 681

Program Student Learning Outcomes

- A teacher of special education: early childhood understands the foundations of special education services for children with a broad range of developmental delays or disabilities on which to base practice.
- A teacher of special education: early childhood understands and applies principles of screening, prevention, and intervening early and procedures for referral, assessment, evaluation, individualized planning, programming, and placement specific to teaching children with a broad range of developmental delays or disabilities.
- A teacher of special education: early childhood understands how to use individual family services plans and individual education program plans to design and implement developmentally appropriate instruction for young children with developmental delays or disabilities or medical conditions.
- A teacher of special education: early childhood cultivates and maintains positive, collaborative relationships with children, families, educators, other professionals, and the community to support student development and educational progress.

- A teacher of special education: early childhood applies the standards of effective practice through a variety of early and ongoing clinical experiences in teaching children who exhibit a broad range of developmental delays or disabilities in infant or toddler, preschool, and primary (kindergarten and grade 1) settings across a range of service delivery models.

Graduate Tracks leading to Licensure

Child and Family Studies

Chairperson: JoAnn Johnson
Address: B109 Education Building
Phone: 320.308.2132
Email:cfs@stcloudstate.edu
Website:www.stcloudstate.edu/cfs

Licensure - Parent Education *(28-34 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- Complete Graduate Studies application with three recommendations and an essay.

Notes

- See program website for information on applying for teacher licensure.
- A GPA of 2.75 or higher must be maintained for successful completion of the licensure track.

Program Requirements

This program provides coursework leading to eligibility for licensure. Child Development: CFS 521, CFS 631. Family Development: CFS 515, CFS 522. Parent Education Methods: CFS 625, CFS 665, CFS 635, CFS 645, CFS 666, Student Teaching requirement, CFS 675

Electives

Parent Education Electives, 6 credits: Previous course work in education, child psychology or family studies may be accepted to meet this licensure requirement. Consult with the advisor to determine which courses can be counted as electives. CFS 626, CFS 627, CFS 632, CFS 636, CFS 646, CFS 654, CFS 655

Communication Sciences & Disorders

BS. BES and Minor

Communication Sciences and Disorders

Chairperson: Rebecca Nelson Crowell
Address: 103 Brown Hall
Phone: 320.308.2092
Email: csd@stcloudstate.edu
Website: www.stcloudstate.edu/csd

BS - Communication Sciences & Disorders *(52 credits)*

Notes

- To progress in the major, student must maintain a cumulative GPA of 3.0 or higher in major courses.

Program Requirements

52 credits: CSD 130, CSD 220, CSD 230, CSD 322, CSD 326, CSD 426, CSD 427, CSD 432, CSD 434, CSD 441, CSD 442, CSD 450, CSD 460, CSD 461, CSD 469, ENGL 361, CPSY 262 or PSY 240

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing CSD 450 with a 'C' or better.

Program Student Learning Outcomes

- The student will demonstrate an understanding of principles of communication sciences & disorders, and linguistics.
- The student will demonstrate knowledge of the principles of Biological Sciences, Physical Sciences, Mathematics, and Social/Behavioral Sciences.
- The student will demonstrate knowledge of basic human communication and swallowing processes, including their biological, neurological, acoustic, psychological, developmental, and linguistic and cultural bases.
- The student will demonstrate knowledge of the nature of speech, language, hearing, and communication disorders

and differences and swallowing disorders, including their etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, and linguistic and cultural correlates. Specific knowledge must be demonstrated in: Articulation; fluency; voice and resonance, including respiration and phonation; receptive and expressive language in speaking, listening, reading, writing, and manual modalities; hearing, including the impact on speech and language; swallowing; cognitive and social aspects of communication; and communication modalities.

BES - Communication Sciences & Disorders *(32 credits)*

- Admission RequirementsCompletion of 9-12 credits in CSD courses.

Program Requirements
Completion of 32 credits with the approval of the department

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing CSD 450 with a 'C' or better. Students may substitute another writing course for CSD 450 with permission of the department.

Minor - Communication Sciences & Disorders *(24 credits)*

Program Requirements
Completion of 24 credits of approved electives.

Minor - Deaf Education *(24 credits)*

Program Requirements
CSD 130, CSD 220, CSD 322, CSD 324, CSD 325, CSD 441, CSD 442, CSD 468.

Program Student Learning Outcomes

- The student will demonstrate an understanding of principles of communication disorders.
- The student will demonstrate knowledge of basic human communication processes, including their biological, acoustic, psychological, developmental, and linguistic and cultural bases.
- The student will demonstrate knowledge of the nature of articulation, language, hearing, and communication disorders and differences, including their etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, linguistic and cultural correlates. Knowledge will be demonstrated in hearing, including the impact on speech and language.

Minor - Speech-Language Pathology Concentration *(24 credits)*

Program Requirements
CSD 130, CSD 220, CSD 322, CSD 432, CSD 434, CSD 442, CSD 468.

Program Student Learning Outcomes

- The student will demonstrate an understanding of principles of communication disorders.
- The student will demonstrate knowledge of basic human communication processes, including their biological, acoustic, psychological, developmental, and linguistic and cultural bases.
- The student will demonstrate knowledge of the nature of articulation, language, hearing, and communication disorders and differences, including their etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, linguistic and cultural correlates. Knowledge will be demonstrated in articulation, fluency, voice and resonance, including respiration and phonation.

MS

Communication Sciences and Disorders

Chairperson: Rebecca Nelson Crowell
Address: 103 Brown Hall
Phone: 320.308.2092
Email: csd@stcloudstate.edu
Website: www.stcloudstate.edu/csd

MS - Communication Sciences and Disorders (Phase II) *(55 credits)*

Admission Requirements

- GPA: 3.0
- The GRE is required.
- A baccalaureate degree in CSD is required for a student to go directly to Phase II (see program website).
- Students with a baccalaureate degree in another discipline must complete Phase I before beginning Phase II (see program website).

Notes

- 8 additional internship credits will be required to meet ASHA certification standards.
- Plans A and B are Phase II of the Communication Sciences and Disorders. See program website for Phase I.

Plan A
Option(s): Thesis
Credits: 55
Core: (45 credits) CSD 636, CSD 642, CSD 675, CSD 625, CSD 566, CSD 601, CSD 605, CSD 603, CSD 606, CSD 602, CSD 670, CSD 604, CSD 676, CSD 611 (4 credits), CSD 612, CSD 613.
Electives:
Research: (10 credits) CSD 607, CSD 620, CSD 699 (6 credits)

Plan B
Option(s): Capstone
Credits: 55
Core: (51 credits) CSD 636, CSD 642, CSD 675, CSD 609, CSD 610, CSD 614, CSD 625, CSD 566, CSD 601, CSD 605, CSD 603, CSD 606, CSD 602, CSD 670, CSD 604, CSD 676, CSD 611 (4 credits), CSD 612, CSD 613.
Electives:
Research: (4 credits) CSD 607, CSD 620

Program Student Learning Outcomes

- The student will demonstrate knowledge of basic human communication and swallowing processes, including their biological, neurological, acoustic, psychological, developmental, and linguistic and cultural bases and swallowing processes.
- The student will demonstrate knowledge of the nature of speech, language, hearing, and communication disorders and differences and swallowing disorders, including their etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, and linguistic and cultural correlates. Specific knowledge must be demonstrated in swallowing.
- The student will possess knowledge of the principles and methods of prevention, assessment, and intervention for people with communication and swallowing disorders, including consideration of anatomical/physiological, psychological, developmental, and linguistic and cultural correlates of the disorders in articulation, fluency, voice and resonance, receptive and expressive language, hearing - including the impact on speech and language, swallowing, cognitive and social aspects of communication, and communication modalities.

Communication Studies

BA, BS and Minor

Communication Studies

Chairperson: R. Jeffrey Ringer
Address: 117 Riverview
Phone: 320.308.2216
Email: cmst@stcloudstate.edu
Website: www.stcloudstate.edu/cmst
Faculty: Communication Studies

BA - Communication Studies-Comprehensive Concentration *(40 credits)*

Admission Requirements

- GPA: 2.0

Notes

- FOR ALL concentrations: Take at least six CMST courses (18 credits) at the 300/400

level with at least two courses (6 credits) at the 400 level. CMST 444, CMST 491, CMST 492 and independent studies will not count toward the 300/400 level requirement.
- The B.A. major requires a minor or one year in a single foreign language.
- Transfer students - please see department website for additional information.

Program Requirements
19 credits: CMST 200, CMST 211 or CMST 210, CMST 220, CMST 300, CMST 301, CMST 319, CMST 330. Select one course from the required courses in two of the following emphases (6 credits): Relational, Persuasion and Advocacy, Intercultural. Select one course (3 credits): CMST 340 or CMST 341 or CMST 441.

Electives
Communication Studies Comprehensive General Electives (9 credits): Select any three CMST 3 credit courses.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMST 403.

Program Student Learning Outcomes

- Students will be able to explain major communication theories and apply them to multiple and diverse contexts.
- Students will be able to design and evaluate communication studies research.
- Students will be able to demonstrate communication competency in multiple contexts.
- Students will be able to demonstrate skills in critical thinking.

BA - Communication Studies-Intercultural Communication Concentration *(40 credits)*

Admission Requirements

- GPA: 2.0

Notes

- FOR ALL concentrations: Take at least six CMST courses (18 credits) at the 300/400 level with at least two courses (6 credits) at the 400 level. CMST 444, CMST 491, 492 and independent studies will not count toward the 300/400 level requirement.
- The B.A. major requires a minor or one year in a single foreign language.
- Transfer students - please see department website for additional information.

Program Requirements
19 credits: CMST 200, CMST 211 or CMST 210, CMST 220, CMST 300, CMST 301, CMST 319, CMST 330. 9 credits: CMST 338, CMST 339, CMST 439.

Electives
Intercultural Communication Electives (6 credits): Select two courses: CMST 229, CMST 302 (repeatable with different topic and designated for this concentration), CMST 310 or CMST 410, CMST 324, 327, CMST 338 (repeatable with different world region), CMST 402 (repeatable with different topic and designated for this concentration), CMST 420, CMST 428, CMST 429, CMST 460, CMST 461. Intercultural Communication General Electives (3 credits): Select any CMST 3 credit course.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMST 403 or CMST 411.

Program Student Learning Outcomes

- Students will be able to explain major communication theories and apply them to multiple and diverse contexts.
- Students will be able to design and evaluate communication studies research.
- Students will be able to demonstrate communication competency in multiple contexts.
- Students will be able to demonstrate skills in critical thinking.

BA - Communication Studies-Leadership & Organizational Communication Concentration *(40 credits)*

Admission Requirements

- GPA: 2.0

Notes

- FOR ALL concentrations: Take at least six CMST courses (18 credits) at the 300/400 level with at least two courses (6 credits) at the 400 level. CMST 444, CMST 491, CMST 492 and independent studies will not count toward the 300/400 level requirement.
- The B.A. major requires a minor or one year in a single foreign language.
- Transfer students - please see department website for additional information.

Program Requirements

19 credits: CMST 200, CMST 211 or CMST 210, CMST 220, CMST 300, CMST 301, CMST 319, CMST 330. 9 credits: CMST 340 or CMST 341, CMST 441, CMST 448

Electives

Leadership and Organizational Communication Electives (6 credits): Select two courses: CMST 229 or CMST 240, CMST 302 (Special Topics in Communication Studies with Leadership and Organizational Communication designation - repeatable with different topic and designated for this concentration), CMST 318, CMST 321, CMST 340, CMST 341, CMST 402 (Special Topics in Communication Studies with Leadership and Organizational Communication designation - repeatable with different topic and designated for this concentration), CMST 412, CMST 428, CMST 429, CMST 439, CMST 444, CMST 460, CMST 461. Leadership and Organizational Communication General Electives (3 credits): Select any CMST 3 credit course.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMST 403.

Program Student Learning Outcomes

- Students will be able to explain major communication theories and apply them to multiple and diverse contexts.
- Students will be able to design and evaluate communication studies research.
- Students will be able to demonstrate communication competency in multiple contexts.
- Students will be able to demonstrate skills in critical thinking.

BA - Communication Studies-Persuasion and Advocacy *(40 credits)*

Admission Requirements

- GPA: 2.0

Notes

- FOR ALL concentrations: Take at least six CMST courses (18 credits) at the 300 or 400 level with at least two courses (6 credits) at the 400 level. CMST 444, CMST 491, 492 and independent studies will not count toward the 300 or 400 level requirement.
- The B.A. major requires a minor or one year in a single foreign language.
- Transfer students - please see department website for additional information.

Program Requirements

19 credits: CMST 200, CMST 211 or CMST 210, CMST 220, CMST 300, CMST 301, CMST 319, CMST 330. 9 credits: Select one of the following: CMST 310 or CMST 318. Select two of the following: CMST 410 or CMST 411 or CMST 412 or CMST 402 (repeatable with different topic and designated for this concentration).

Electives

Persuasion and Advocacy Electives (6 credits): Select two courses: CMST 210 (if not taken in core), CMST 211 (if not taken in core), CMST 302 (repeatable with different topic and designated for this concentration), CMST 306 or ENGL 306, CMST 310, CMST 313, CMST 314, CMST 316, CMST 318, CMST

338, CMST 340, CMST 341, CMST 402 (repeatable with different topic and designated for this concentration), CMST 410, CMST 411, CMST 412, CMST 439, CMST 441, CMST 448, CMST 460, CMST 461. Persuasion and Advocacy General Electives (3 credits): Select any CMST 3 credit course.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMST 403 or CMST 411. Students who double count CMST 411 as both the UDWR and as three credits of the emphasis program requirements should take one additional CMST elective.

BA - Communication Studies-Relational Communication Concentration *(40 credits)*

Admission Requirements

- GPA: 2.0

Notes

- FOR ALL concentrations: Take at least six CMST courses (18 credits) at the 300/400 level with at least two courses (6 credits) at the 400 level. CMST 444, CMST 491, CMST 492 and independent studies will not count toward the 300/400 level requirement.
- The B.A. major requires a minor or one year in a single foreign language.
- Transfer students - please see department website for additional information.

Program Requirements
19 credits: CMST 200, CMST 211 or CMST 210, CMST 220, CMST 300, CMST 301, CMST 319, CMST 330. 9 credits: CMST 320, CMST 321, CMST 420

Electives
Relational Communication Electives (6 credits): Select two courses: CMST 229, CMST 302 (repeatable with different topic and designated for this concentration), CMST 324, CMST 327, CMST 340, CMST 341, CMST 402 (repeatable with different topic and designated for this concentration), CMST 410, CMST 420 repeatable with different topic), CMST 439, CMST 444, CMST 448, CMST 460, CMST 461. Relational Communication General Electives (3 credits): Select any CMST 3 credit course.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMST 403.

Program Student Learning Outcomes

- Students will be able to explain major communication theories and apply them to multiple and diverse contexts.
- Students will be able to design and evaluate communication studies research.
- Students will be able to demonstrate communication competency in multiple contexts.
- Students will be able to demonstrate skills in critical thinking.

BA - Communication Studies Supplementary Major *(28 credits)*

Admission Requirements

- GPA: 2.0

Notes

- To be eligible for this major, the student must declare a primary major from another department in the University.
- Transfer students - please see department website for additional information.

Program Requirements
16 credits: CMST 200, CMST 211 or CMST 210, CMST 220, CMST 301, CMST 300 or CMST 319, CMST 330.

Electives
Select 12 elective credits from the CMST curriculum in consultation with a CMST advisor. Take at least 5 CMST courses at the 300/400 level; 1 of those must be at the 400 level (excluding CMST 444, CMST 452, CMST 453, CMST 491, CMST 492 and independent studies as counting toward the 400 level).

The Upper Division Writing Requirement (UDWR) is to be met in the student's primary major.

Program Student Learning Outcomes

- Students will be able to explain major communication theories and apply them to multiple and diverse contexts.
- Students will be able to design and evaluate communication studies research.
- Students will be able to demonstrate communication competency in multiple contexts.
- Students will be able to demonstrate skills in critical thinking.

BS - Communication Arts and Literature *(47-51 credits)*

Admission Requirements

- GPA: 2.75
- C or better in ENGL 191 and CMST 192.
- Completion of 36 semester hours, with at least 12 semester hours in residence at SCSU, and submission of scores on the current basic skills requirement.

Program Requirements

(47-51 credits): Communication and Language (16 credits) CMST 211, CMST 229, CMST 310, CMST 339, ENGL 361. Advanced Writing (3-4 credits): ENGL 331 or ENGL 332 or ENGL 333 or ENGL 334 or ENGL 353 or ENGL 464. Literature (19-22 credits): ENGL 300, ENGL 323; Diversity: ENGL 203 or ENGL 215 or ENGL 216 or ENGL 302 or ENGL 303 or ENGL 305 or ENGL 414 or ENGL 493. British Literature: ENGL 321 or ENGL 322 or ENGL 325 or ENGL 326 or ENGL 327 or ENGL 328. American Literature: ENGL 310 or ENGL 311 or ENGL 312 or ENGL 313. Choose ENGL 454 or ENGL 402 or one more American or British Literature course. Pedagogy (9 credits): ENGL 351, CMST 452, ENGL 451.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing ENGL 451.

Program Student Learning Outcomes

- Students will be able to explain major communication theories and apply them to multiple and diverse contexts.
- Students will be able to design and evaluate communication studies research.
- Students will be able to demonstrate communication competency in multiple contexts.
- Students will be able to demonstrate skills in critical thinking.

BS - Communication Studies Interdepartmental *(55 credits)*

Admission Requirements

- GPA: 2.0

Notes

- Take at least two courses (6 credits) at the 400 level: CMST 444, CMST 491, CMST 492 and independent studies will not count toward the 400 level requirement.
- Transfer students - please see department website for additional information.

Program Requirements

19 credits: CMST 200, CMST 211 or CMST 210, CMST 220, CMST 300, CMST 301, CMST 319, CMST 330. Students will select 3 credits from the following courses: CMST 410, CMST 411, CMST 412, CMST 420, CMST 439, CMST 441, CMST 448.

Electives

Students will select 6 elective CMST credits in consultation with an advisor. Students will select 24 elective credits from at least two other departments (in consultation with an advisor and approved by the department).

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMST 403.

Program Student Learning Outcomes

- Students will be able to explain major communication theories and apply them to multiple and diverse contexts.

- Students will be able to design and evaluate communication studies research.
- Students will be able to demonstrate communication competency in multiple contexts.
- Students will be able to demonstrate skills in critical thinking.

Minor - Applied Relational Conflict Management *(21 credits)*

Admission Requirements

- GPA: 2.0

Notes

- Transfer students - please see department website for additional information.

Program Requirements

CMST 321, CMST 428, CMST 429. Select two of the following: CMST 220, CMST 229, CMST 302, CMST 318, CMST 339, CMST 412, CMST 402. In consultation with advisor, select 6 credits of related coursework from: CJS 489, ETHS 312, ETHS 405, HURL 201, HURL 406, MGMT 352, MGMT 365, MGMT 451, PSY 270, PSY 355, PSY 425, SOC 201, SOC 268, SOC 310, SOC 366, SOC 374, SOC 472, SOC 474.

Program Student Learning Outcomes

- Students will be able to identify and explain key theories related to the role of conflict in interpersonal relationships.
- Students will be able to identify and explain a variety of theories of third party intervention.
- Students will be able to perform problem solving/collaborative communication skills in mediating conflict.

Minor - Communication Studies *(19 credits)*

Admission Requirements

- GPA: 2.0

Notes

- Transfer students - please see department website for additional information.

Program Requirements

CMST 200, CMST 210 or CMST 211, CMST 220 or CMST 340, CMST 300 or CMST 319. Select: One course at 400 level.

Electives

Select: Two electives, one of which must be at 300/400 level. CMST 444, CMST 491, CMST 492 and independent studies do not count toward the 300/400 level requirement.

Minor - Intercultural Communication *(21 credits)*

Admission Requirements

- GPA: 2.0

Notes

- Transfer students - please see department website for additional information.

Program Requirements

CMST 220, CMST 330, CMST 338, CMST 439. Select one: ETHS 201, ANTH 250. Select two: CMST 339; AFST 250; ANTH 311; LAST 250, LAST 350; ENGL 184; GER 341; JPN 101; GEOG 270, GEOG 486; HIST 350, HIST 352, HIST 354, HIST 370; EAST 363, EAST 364; HURL 201; MGMT 470; POL 251, POL 337; SST 470 or any foreign language course 200-level or above.

Program Student Learning Outcomes

- Students will be able to differentiate among and explain the effects of ethnocentrism, stereotypes, prejudice and discrimination on intercultural communication, especially as these relate to diversity, intercultural competence, and ethics.
- Students will be able to analyze differences in worldview through comparisons of religion, historical events and values.
- Students will be able to explain the co-influence of language, thought,

perception and nonverbal communication on intercultural interactions.
- Students will be able to explain the effects of cultural orientations in various contexts.
- Students will be able to explain challenges facing immigrant and refugee communities and identify strategies to improve interactions between host and immigrant/refugee communities.

Certificate - Professional Communication *(15 credits)*

Program Requirements
15 Credits: CMST 211 and either MKTG 333 or ENGL 332; CMST 340 or CMST 448; CMST 341 or CMST 321; CMST 330 or CMST 439.

Certificate - Communication in Health Care Contexts *(15 credits)*

Program Requirements
15 Credits: CMST 220, CMST 229, CMST 460, CMST 461 and either CMST 330 or CMST 339

Community Psychology, Counseling, & Family Therapy

BS, BES and Minor

Community Psychology, Counseling and Family Therapy

Chairperson: William Lepkowski
Address: B210 Education Building
Phone: 320.308.2160
Email: ccp@stcloudstate.edu
Website: www.stcloudstate.edu/ccp

BS - Chemical Dependency *(81 credits)*

Admission Requirements

- GPA: 2.0
- Submission of a formal application. Successful completion of personal interview/statement.

Program Requirements
CPSY 101, CPSY 102, PSY 115, STAT 219, CPSY 262, CPSY 323, CPSY 324, CPSY 325, CPSY 327, CPSY 330, CPSY 384, CPSY 433, CPSY 419, CPSY 476. Chemical Dependency Courses: CPSY 402, CPSY 428, CPSY 437, CPSY 438, CPSY 439, CPSY 445, CPSY 446, CPSY 484.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing CPSY 476.

Program Student Learning Outcomes

- Apply critical thinking skills in expanding self-awareness, social awareness, personal growth, and life choices. Identify history, theory, and trends in applied psychology their impact on ones life and the lives of others.
- Develop coherent philosophy, knowledge base, and skills related to multicultural counseling at an individual and societal level. Demonstrate ability to interpret and apply results of basic applied statistical procedures.
- Develop an understanding of the biological, social, cognitive and psychosocial domains of human development across the life span. Identify history, theory, and trends in counseling and their application to a helping relationship.
- Demonstrate mastery of a personal model of helping that is relevant in a multicultural and global context, and one based on personal awareness and knowledge of current theoretical approaches. Apply appropriate counseling strategies for working with diverse populations.
- Demonstrate mastery over relevant basic helping skills that are effective in a multicultural and global context. Integrate theoretical and experiential learning to form a personal model of helping in the context of current psychological theories.
- Observe and describe group process variables. Interpret the dynamics of a group process. Identify basic principles and procedures of behavior analysis and their application to everyday life. Apply knowledge of principles of behavior in designing, assessing, and evaluating behavior change procedures in applied settings.

- Obtain an enhanced understanding of multicultural values and beliefs and their influence on counseling and psychological processes. Analyze the nature, dynamics, and role of helper in bringing about social change. Explore local, national, world events and think critically about their relationship to daily lives of individuals, Microsystems, organizations, localities, and macro systems.
- Learn the concepts and application for addiction screening, assessment, treatment planning, case management, crisis intervention, and working with diverse populations completing a full client file from intake to aftercare which will be reviewed by site supervisor. Show capacity for curriculum development in psych educational group demonstration. Understand the ethics and legal requirements of addiction professionals.
- To learn the range of substance abuse treatment services and client placement criteria. Develop an understanding of therapist responsibility, competence and confidentiality as they relate to ethical issues. Integrate knowledge of key ethical principles into a multicultural context. Demonstrate the ability to evaluate and design psychological research. To examine your own cultural beliefs, racial/ethnic heritage, as well as your attitudes, values, and biases in an effort to enhance your appreciation of how these variables influence counseling and psychological processes.
- To have a basic understanding of the routes of drug administration, absorption, and metabolism. To understand the neuro-behavioral mechanisms of different medications and how this affects behavior. To learn methods of evaluation and intervention of substance abuse problems. To demonstrate the ability to assess substance abuse disorders using the DSM-IV TR. To review a variety of treatment models including medical models, personality models, and mind-body models. Evaluate the incidence and prevalence of substance abuse and dependency in differing populations.

BS - Community Psychology *(44 credits)*

Admission Requirements

- GPA: 2.0
- Submission of major application.

Notes

- See Department for information about a double major in Community Psychology and Chemical Dependency.

Program Requirements

CPSY 101, CPSY 102, PSY 115, STAT 219, CPSY 262, CPSY 323, CPSY 324, CPSY 325, CPSY 330, CPSY 384, CPSY 433, CPSY 327 or CPSY 434, CPSY 326 or CPSY 444 or CPSY 445, CPSY 419, CEEP 476.

Electives

Electives with consent of CPSY advisor.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CPSY 476.

Program Student Learning Outcomes

- Identify the relationship between the well being of individuals and the effectiveness of families, community organizations, communities, and the broader society.
- Apply current theoretical approaches to a personal model of helping relevant in a multicultural, global context.
- Exhibit mastery over relevant basic helping skills (interventions) for a multicultural, global context.
- Apply principles of behavior in designing, assessing, and evaluating behavior change procedures in applied settings.
- Apply knowledge of quantitative and qualitative procedures for exploring, understanding, and describing individual and social concerns.
- Apply awareness of self in the context of a helping relationship.
- Apply key ethical principles in a multicultural context.

- Demonstrate ability to write in the formats required in the major.

BES - Community Psychology-BES *(36 credits)*

Admission Requirements

- GPA: 2.0

Notes

- See Department for information about a double major in Community Psychology or Chemical Dependency.

Program Requirements
Completion of 36 credits in Community Psychology with consent of advisor for BES degree.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing CEEP 476.

Minor - Community Psychology (BS, BES) *(26 credits)*

Program Requirements
CPSY 101, CPSY 102, PSY 115, CPSY 262, CPSY 323, CPSY 324, CPSY 330, CPSY 384, CPSY 419.

Electives
Electives with the consent of CPSY advisor.

Minor - Applied Behavior Analysis *(18 credits)*

Admission Requirements

- GPA: 2.5

Program Requirements
CPSY 330, CPSY 384, CPSY 433, CPSY 434, CPSY 436, CPSY 441.

Certificates

Community Psychology, Counseling and Family Therapy

Chairperson: William Lepkowski
Address: B210 Education Building
Phone: 320.308.2160
Email: ccp@stcloudstate.edu
Website: www.stcloudstate.edu/ccp

Certificate - Addictions Specialist *(27 credits)*

Admission Requirements

- GPA: 2.75
- A baccalaureate degree in a related field is required.
- If the baccalaureate degree does not include course equivalents, the following courses are prerequistes: CPSY 323 and CPSY 324, CPSY 325, CPSY 327.
- Submission of a statement of intent that includes reference to addictions in your life (direct or indirectly).
- Successfully complete a personal interview with faculty from the chemical dependency training program and representatives of the chemical dependency profession.
- Provide written verification of one year of abstinence from drugs if in recovery.

Notes

- Students completing six credits of internship as CPSY 696 or CPSY 545 as part of their master's degree program will complete six additional credits beyond the master's degree as required to meet the internship requirements for addictions licensure.
- Chemical Dependency Internships.The internship experience involves 880 hours of supervised training, 440 hours in an inpatient chemical dependency treatment center in central Minnesota and surrounding communities. An additional 440 hours of supervised training in an outpatient treatment setting are required to complete the requirements. Sites include public and private treatment facilities for adolescents and adults, regional human service centers, and veterans' hospitals. Acceptance for internship requires approval of the internship review committee following the completion of all course work.

Program Requirements
This program provides coursework leading to eligibility for a certificate. 27 credits: CPSY 502, CPSY 537, CPSY 538, CPSY 539, CPSY 545, CPSY 684,

Electives
See Department for electives.

Certificate - Marriage and Family Therapy *(39-42 credits)*

Admission Requirements

- GPA: 3.0
- A graduate degree from a mental health clinical program.
- The GRE is not required.
- A current resume listing educational background, professional experience, and volunteer involvements.
- A personal statement including statement of interest, background information, professional goals, strengths and challenges in seeking a graduate degree. For more information, go to program website.

Notes

- Program currently not admitting new students.

Program Requirements
This program provides coursework leading to eligibility for a graduate certificate. 36 - 39 credits: MFT 620, MFT 621, MFT 627 (Pre-requisite MFT 671), MFT 624 (pre-requisite MFT 671, MFT 659), MFT 628, MFT 671, (Pre-requisite MFT 621), MFT 672, (Pre-requisites: MFT 621, MFT 671), MFT 658, (Pre or Co-requisite MFT 621, MFT 671), MFT 619, MFT 630, MFT 696

Program Student Learning Outcomes

- Graduates of the program will demonstrate a readiness for employment in a clinical position working with children and families.
- Students will explore their own family of origin and cultural heritage as it relates to their clinical practice.
- Students will be able to communicate effectively through oral and written work.
- Students and graduates will demonstrate empathic and respectful interpersonal skills when working with families and individuals from all backgrounds, including cross-cultural.
- Students and graduates will skillfully assess and evaluate individuals and families of diverse backgrounds in order to build relevant treatment plans.

Certificate - School Counseling *(22 credits)*

Admission Requirements

- GPA: 2.75
- A master's degree in counseling, psychology, human development, education, special education, social work, or any other mental health field is required to qualify for certificate the program.
- The GRE is not required.
- Successful completion of an interview is required.

Notes

- See program website for more information.
- Contact department to set up interview date and time.

Program Requirements
This program provides coursework leading to eligibility for a graduate certificate. CEEP 619, CEEP 654, CEEP 668, CEEP 670, CEEP 681, CEEP 696. Students without a current Minnesota Educator License: CEEP 361, ED 647, HURL 497/597, HURL 498/598, (counts as one class).

Program Student Learning Outcomes

- Develop student professional knowledge, skills, and dispositions including: learning to communicate effectively; develop a greater self-understanding; learn and adhere to the legal and ethical guidelines of the profession; increase levels of multicultural competence; ability to

work effectively with K-12 students, school personnel and parents; apply evidence-based best practices to school counseling work; develop a comprehensive school counseling program; and become prepared for doctoral level training.
- Develop student professional identity by: helping students identify as counselors first, who then specialize in school counseling; encouraging students to become members of professional organizations such as the American Counseling Association (ACA), the American School Counselors Association (ASCA), and the Minnesota School Counselors Association (MSCA). Encourage participation in appropriate professional growth and networking activities such as: the CMCA/Dugan Symposium, MSCA Annual Conference, MSCA Day on the Hill, and ASCA and ACA national conferences.
- Students will be able to: think creatively and critically; seek and apply knowledge; communicate effectively; understand and integrate existing and evolving technologies; act with integrity and responsibility; and engage as a member of a diverse and multicultural world.

MS

Community Psychology, Counseling and Family Therapy

Chairperson: William Lepkowski
Address: B210 Education Building
Phone: 320.308.2160
Email: ccp@stcloudstate.edu
Website: www.stcloudstate.edu/ccp

MS - Applied Behavior Analysis *(45-46 credits)*

Admission Requirements

- GPA: 2.75

Notes

- Admission Deadline Specific to the Program. M.S. in ABA : February 1 for fall semester start date. See program web site for details.
- All students are required to complete a 750-hour clinical internship in an applied setting agreed upon by the student and the faculty advisor. Internship activities are under the direction of a faculty supervisor and an on-site supervisor. On-site supervision will be provided by a Licensed Psychologist (or equivalent) and or a BCBA certified behavior analyst or equivalent.

Plan A
Option(s): Thesis
Credits: 45
Core: 24 credit minimum: ABA 597, ABA 541, ABA 630, ABA 633, ABA 634, ABA 635, ABA 636, ABA 643. Required Internship, 9 credits, ABA 697.
Electives: 3 credit minimum: CEEP 678, ABA 637, ABA 638, ABA 530
Research: 9 credit minimum. ABA 641, ABA 699

Plan B
Option(s): Comprehensive Exam
Credits: 46
Core: 24 credit minimum: ABA 597, ABA 541, ABA 630, ABA 633, ABA 634, ABA 635, ABA 636, ABA 643. Required Internship, 9 credits, ABA 697. Comprehensive Exam Preparation, 4 credits, ABA 639, ABA 640.
Electives: 6 credit minimum: CEEP 678, ABA 637, ABA 638, ABA 530
Research: 3 credit minimum: ABA 641

Program Student Learning Outcomes

- Use the most effective assessment and behavior change procedures within applicable ethical standards taking into consideration the guideline of minimal intrusiveness of the procedure to the client.
- Explain and behave in accordance with the philosophical assumptions of behavior analysis, such as the lawfulness of behavior, empiricism, experimental analysis, and parsimony.
- Define and provide examples of positive and negative reinforcement.

- State the primary characteristics of and rationale for conducting a descriptive assessment.
- Identify and address practical and ethical considerations in using various experimental designs.
- Identify the measurable dimensions of behavior (e.g., rate, duration, latency, or inter-response times).
- Interpret and base decision-making on data displayed in various formats.
- Make recommendations to the client regarding target outcomes based upon such factors as: client preferences, task analysis, current repertoires, supporting environments, constraints, social validity, assessment results and best available scientific evidence.
- Use positive and negative reinforcement. Provide behavior analysis services in collaboration with others who support and/or provide services to one's clients.
- Maintains professional and courteous interactions with clients and coworkers.

MS - Clinical Mental Health Counseling *(61 credits)*

Admission Requirements

- GPA: 3.00
- A current resume listing education background, professional experience and volunteer and community involvements. See program website for additional information.

Notes

- Full-licensure: An additional 2000 post-masters degree supervised clinical contact hours in a clinical setting is required to complete the requirements for Professional Counseling licensure in the state of Minnesota.
- The curriculum of CMHC is designed to satisfy both LPC and LPCC licensure requirements in Minnesota. More information can be found online at the BBHT (http://mn.gov/boards/behavioral-health/)

Plan A

Option(s): Thesis
Credits: 61
Core: COUN 601, COUN 603, COUN 666, COUN 668, COUN 651, COUN 620, COUN 658, CPSY 698, COUN 665, COUN 671, COUN 628, COUN 659, COUN 664, CPSY 669, COUN 667, COUN 696 (600 hours). (Prerequisite COUN 620, COUN 651, COUN 658, COUN 666, COUN 668, CPSY 669, COUN 671). Other courses or changes may be substituted with consent of advisor.
Electives:
Research: COUN 676 (3 Cr.), CPSY 699 (6 Cr.)

Plan B

Option(s): Comprehensive Exam
Credits: 61
Core: COUN 601, COUN 603, COUN 666, COUN 668, COUN 651, COUN 620, COUN 658, CPSY 698, COUN 665, COUN 671, COUN 628, COUN 659, COUN 664, CPSY 669, COUN 667, COUN 696 (600 hours). (Prerequisite COUN 620, COUN 651, COUN 658, COUN 666, COUN 668, CPSY 669, COUN 671). Other courses or changes may be substituted with consent of advisor.
Electives: 6 credits. Must be approved by CMHC Advisor
Research: COUN 676 (3 Cr.)

Program Student Learning Outcomes

- Apply psychological principles throughout the lifespan.
- Describe theories of counseling, behavior analysis, and chemical dependency.
- Demonstrate individual and group helping skills.
- Describe principles, procedures, and applications of applied behavior analysis.
- Incorporate multicultural and ethical perspectives in the application of psychology.
- Apply theories and diagnoses of addictions, family systems, and psychopharmacology

MS - College Counseling and Student Development *(42-48 credits)*

- Admission RequirementsGPA 2.75
- The GRE is not required.

Plan A
Option(s): Thesis
Credits: 48
Core: (36 credits) Pre-practicum: (12 credit minimum) CEEP 619, CEEP 645, CEEP 667, CEEP 668; College Student Development: (24 credit minimum) CEEP 658, CEEP 666, CEEP 669, CEEP 673, CEEP 681, CEEP 530, CEEP 697
Electives:
Research: (12 credits) CEEP 675, CEEP 678, CEEP 699

Plan B
Option(s): Comprehensive Exam
Credits: 42
Core: (36 credits) Pre-practicum: (12 credit minimum) CEEP 619, CEEP 645, CEEP 667, CEEP 668; College Student Development: (24 credit minimum) CEEP 658, CEEP 666, CEEP 669, CEEP 673, CEEP 681, CEEP 530, CEEP 697
Electives:
Research: (6 Credits): CEEP 675, CEEP 678

Program Student Learning Outcomes

- Demonstrate knowledge of the historical roots, philosophical assumptions, and critical issues underlying the student affairs profession in higher education.
- Demonstrate an understanding and appreciation for students of multicultural and or diverse backgrounds by characterizing the special needs of a variety of student subgroups (e.g., non-traditional adult, racial, ethnic, women, international students).
- Demonstrate an understanding of the relationship between theory, practice and informed research by designing student development interventions that utilize these tools of inquiry.
- Demonstrate analytical skills through knowledge acquisition and application through the use of assessment and evaluation techniques, research methods, critical thinking, and computer technology.
- Demonstrate the ability to transform theoretical knowledge about the development of organizations and individuals into effective counseling, instruction, supervision, program design, administration, research and evaluation practices.
- Demonstrate knowledge and understanding of student development, counseling, human growth and development, career development, and organizational theories.

MS - Marriage and Family Therapy *(52-58 credits)*

Admission Requirements

- GPA: 3.0
- A baccalaureate degree from an accredited institution.
- The GRE is not required.
- A current resume listing educational background, professional experience, and volunteer involvements.
- A personal statement including statement of interest, background information, professional goals, strengths and challenges in seeking a graduate degree. For more information, go to program website.

Plan A
Option(s): Thesis
Credits: 58
Core: 46 credits: MFT 619, MFT 620, MFT 621, MFT 627 (Pre or Co-requisite MFT 671), MFT 624 (Pre or Co-requisite MFT 671, MFT 659), MFT 658, (Pre or Co-requisite MFT 621, MFT 671), MFT 659, MFT 668, MFT 669 (Pre-requisites: MFT 621, MFT 619, MFT 659, MFT 668, & MFT 671), MFT 671 (Pre-requisite MFT 621), MFT 672 (Pre-requisites: MFT 621, MFT 671), MFT 696 (Pre-requisites: MFT 619, MFT 620, MFT 621, MFT 624, MFT 659, MFT 671), MFT 630, MFT 628
Electives:
Research: 12 credits: MFT 675 (Pre-requisites:CEEP 678), CEEP 678, MFT 699

Plan B
Option(s): Comprehensive Exam
Credits: 52
Core: 46 credits: MFT 619, MFT 620, MFT 621, MFT 627 (Pre-requisite MFT 671), MFT 624 (Pre-requisite MFT 659, MFT 671), MFT 658 (Pre or Co-requisite MFT 621, MFT 671), MFT 659, MFT 668, MFT 669, (Pre-requisites: MFT 621; Pre or Co-requisite MFT 619, MFT 659, MFT 668, & MFT 671), MFT 671, (Pre-requisite MFT 621), MFT 672 (Pre-requisites: MFT

621, MFT 671), MFT 696 (Pre-requisites: MFT 619, MFT 620, MFT 621, MFT 624, MFT 659 & MFT 671), MFT 630, MFT 628
Electives:
Research: 6 credits: CEEP 678, MFT 675 (Pre-requisites: CEEP 678)

Program Student Learning Outcomes

- Graduating students and alumni will demonstrate competent clinical skills from a systemic, theoretical, and research based foundation.
- Students and alumni will demonstrate empathic and respectful interpersonal skills when working with families and individuals from all backgrounds, including cross-cultural.
- Graduating students will demonstrate the ability to be reflective and ethical in their clinical practice, including recognizing their own biases that may be an extension of their family of origin and cultural heritage.
- Students and alumni will skillfully assess and evaluate individuals and families of diverse backgrounds in order to build relevant treatment plans.
- Students and graduates will be able to communicate effectively through oral and written academic work and clinical paperwork.
- Students will comprehend and demonstrate knowledge of human diversity including an appreciation of diversity of family types, ethnicities, gender, sexual orientation, and SES.

MS - Rehabilitation and Addiction Counseling *(60-63 credits)*

Admission Requirements

- GPA: 2.75
- Baccalaureate degree from accredited institution in community psychology or other closely related human services major

Plan A
Option(s): Thesis
Credits:
Core: CEEP 665, CEEP 667, CEEP 668, CEEP 530, CEEP 629, CEEP 650, CEEP 652, CEEP 666, CEEP 669, CEEP 684, CPSY 537, CPSY 538, CPSY 539, CPSY 530 Seminar in Adolescence, CPSY 530 Seminar Addiction in Family Systems, CPSY 545 (9 credits of CPSY 545 over two semesters)
Electives: none
Research: 9 credits: CEEP 675, CEEP 678, CEEP 699

Plan B
Option(s): Comprehensive Exam
Credits:
Core: CEEP 665, CEEP 667, CEEP 668, CEEP 530, CEEP 629, CEEP 650, CEEP 652, CEEP 666, CEEP 669, CEEP 684, CPSY 537, CPSY 538, CPSY 539, CPSY 545. (nine credits of CPSY 545 over two semesters of internship) CPSY 530 Seminar Addictions in Family Systems, CPSY 530 Seminar in Adolescence
Electives: none
Research: 6 credits: CEEP 675, CEEP 678

MS - Rehabilitation Counseling *(48-52 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is required.

Notes

- All counseling concentrations include a common core of course work prerequisite to the supervised counseling practicum experience: CEEP 651, CEEP 665, CEEP 667, CEEP 668.

Plan A
Option(s): Thesis
Credits: 52
Core: Pre-Practicum: 12 credits: CEEP 651, CEEP 665, CEEP 667, CEEP 668. Rehabilitation Counseling Courses: 28 credits: CEEP 530, CEEP 629, CEEP 650, CEEP 652, CEEP 653, CEEP 666, CEEP 669, CEEP 696. Students with three or more years of full-time experience in vocational rehabilitation settings may substitute some courses with consent of their advisor. Recommendations by the rehabilitation counseling faculty will be given only for those courses in which the experienced student demonstrates the competencies encompassed in the courses for which substitution is requested.
Electives: 0 credits
Research: 12 credits: CEEP 675, CEEP 678,CEEP 699

Plan B
Option(s): Comprehensive Exam
Credits: 48
Core: Pre-Practicum: 12 credits: CEEP 651, CEEP 665, CEEP 667, CEEP 668. Rehabilitation Counseling Courses: 28 credits CEEP 530, CEEP 629, CEEP 650, CEEP 652, CEEP 653, CEEP 666, CEEP 669, CEEP 696. Students with three or more years of full-time experience in vocational rehabilitation settings may substitute some courses with consent of their advisor. Recommendations by the rehabilitation counseling faculty will be given only for those courses in which the experienced student demonstrates the competencies encompassed in the courses for which substitution is requested.
Electives: 2 credits: Electives must be approved by the advisor.
Research: 6 credits: CEEP 675, CEEP 678

Program Student Learning Outcomes

- Knowledge, understanding, and a professional attitude toward the Rehabilitation Counseling setting in which he/she will work as well as any related "helping" community agencies.
- Understanding of the research process as it applies to Rehabilitation Counseling.
- Knowledge, understanding, and professional attitude and skills needed to relate effectively with individuals, groups and institutions, and understanding of principles of program design, implementation, and evaluation within the work setting which will help those individuals.
- Communicate effectively, both orally and in writing.
- Understand the philosophies and techniques pertinent to Rehabilitation Counseling and possess his/her own professional acceptance skills in using these techniques to help others.
- Self understanding.
- Prepared for doctoral level training and/or certification.

MS - School Counseling *(52-58 credits)*

Admission Requirements

- GPA: 3.0
- The GRE is required.
- Submission of a personal data form obtained from the Department of Counseling and Community Psychology.
- Successfully complete a personal interview with representatives of the profession, advanced students in the program and the counseling faculty. For specific interview dates and an appointment, contact the departmental secretary.

Notes

- All counseling concentrations include a common core of course work prerequisite to the supervised counseling practicum experience: CEEP 530, CEEP 619, CEEP 651, CEEP 666, CEEP 668.

Plan A
Option(s): Thesis
Credits: 58
Core: 46 credits minimum: CEEP 619, CEEP 651, CEEP 654, CEEP 658, CEEP 665, CEEP 666, CEEP 667, CEEP 668, CEEP 669, CEEP 670, CEEP 672, CEEP 681, CEEP 696, Select One: PSY 640, CEEP 530. Required practicum.
Electives:
Research: 12 credit minimum: CEEP 675, CEEP 678, CEEP 699

Plan B
Option(s): Comprehensive Exam
Credits: 52
Core: 46 credits minimum: CEEP 619, CEEP 651, CEEP 654, CEEP 658, CEEP 665, CEEP 666, CEEP 667, CEEP 668, CEEP 669, CEEP 670, CEEP 672, CEEP 681, CEEP 696, Select One: PSY 640, CEEP 530. Required practicum.
Electives:
Research: 6 credit minimum: CEEP 675, CEEP 678

Program Student Learning Outcomes

- Students will learn to be effective counselors.
- Students will learn to communicate effectively.
- Students will develop a greater self-understanding.

- Learn and adhere to the legal and ethical guidelines of the profession.
- Develop increasing levels of multicultural competence.
- Learn to work effectively with K-12 students, parents, and staff.
- Learn and apply evidence-based best practices to school counseling work.
- Learn how to develop a comprehensive school counseling program.

Computer Science & Information Technology

BS and Minor

Computer Science and Information Technology

Chairperson: Ramnath Sarnath
Address: 139 Engineering & Computing Center
Phone: 320.308.4966
Email: csit@stcloudstate.edu
Website: www.stcloudstate.edu/csit

BS - Computer Science *(79-83 credits)*

Admission Requirements

- GPA: 2.50
- MATH 271, and CSCI 200 or CSCI 201, all with a grade of "C-" or better.
- GPA of at least 2.5 in all courses required for the program, including transfer courses.

Notes

- While in the major or minor program, students must maintain a GPA of at least 2.50, both overall and in courses required for the major.
- If a student retakes courses in the major, the program GPA is computed based on all attempts.
- A minimum grade of "C-" is also required in all courses to be applied toward a departmental major or minor program.
- The total credits from Math and Science courses must be at least 30.
- At least one-half of the 300- and 400-level computer science courses in this major program must be taken from the Department of Computer Science at SCSU.

Program Requirements

(59-63 credits) CSCI courses (31 credits): CSCI 201, CSCI 220, CSCI 301, CSCI 310, CSCI 311, CSCI 320, CSCI 330, CSCI 331, CSCI 332, CSCI 334. Math/Stat courses (17-18 credits): MATH 221, MATH 271, MATH 312, STAT 353 or STAT 417, and MATH 222 or MATH 304. Professional Communication (3-4 credits): ENGL 332 or CMST 341. Science sequence (select one of the following pairs; 8-10 credits): a. PHYS 231 and PHYS 232; b. BIOL 151 and BIOL 152; c. CHEM 210 and CHEM 211; d. PHYS 234 and PHYS 235.

Electives

(18-20 credits) Science courses (3-5 credits): select a different subject from those in your chosen required sequence. ASTR 311, ASTR 312; ASTR BIOL 151, BIOL 152, CHEM 207, CHEM 210, CHEM 211; ECE 201; ENGR 332; AHS 220, AHS 260; PHYS 231, PHYS 232, PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 333. CSCI Electives (15 credits): select from at least 3 of the following areas, with the approval of your advisor. Systems: CSCI 411, CSCI 412, CSCI 413, CSCI 415; Theory: CSCI 402, CSCI 403, CSCI 404, CSCI 406; Artificial Intelligence: CSCI 440, CSCI 441, CSCI 442, CSCI 443; Software Engineering: CSCI 430, CSCI 431, CSCI 432; Applications: CSCI 450.

The upper division writing requirement is met through CSCI 334.

Program Student Learning Outcomes

- Apply structured principles and good practices to the task of developing software systems.
- Understand how hardware provides the necessary structure for execution and influences the design of software.
- Understand general operating system functions and structures, comprehend system capabilities, and modify systems to meet specifications.
- Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
- Understand the professional code of ethics and the need to conduct themselves in a professional manner.

- Apply formal methods to the process of constructing systems and appreciate the need to study and develop such methods.
- Analyze the processes used when designing a system and employ established frameworks to evaluate the completed work.
- Apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.

BS - Cybersecurity *(77-79 credits)*

Admission Requirements

- GPA: 2.50
- Completion of CNA 397, CSCI 201, and MATH 271 or equivalent. Grade of "C" or better in each of the above courses with a 2.50 GPA or higher in the above courses.

Program Requirements

(65-67 credits) CNA 267, CNA 268 (CSCI 200 or ECE 102 may replace CNA 267 and CNA 268), CNA 397 or CSCI 310, CNA 425, CNA 426 or CSCI 413, CNA 430, CNA 432, CNA 431, CNA 433, CNA 435, CNA 438 or CSCI 415, CNA 465, CNA 473, CSCI 201, CSCI 220, CSCI 332, ENGL 332 or CMST 341, MATH 221, MATH 271, STAT 417, IS 472, IS 443.

Electives

Select 12 credits from the following: CNA 475, CNA 451, IS 481, IS 483, CJS 496, CJS 486, CSCI 412, up to six credits of CNA 444. Additional courses with permission of adviser.

The Upper Division Writing requirement is met through CNA 473.

Program Student Learning Outcomes

- Write correct, well documented and readable programs.
- Describe and use networks.
- Describe and use operating systems.
- Articulate ethical and professional standards of behavior.
- Communicate effectively in written and oral exchanges.
- Design and implement secure network architecture based on security policies.
- Identify and correct security weaknesses in operating systems, networks, and applications.
- Demonstrate understanding of theoretical foundations of security by solving problems.

BS - Software Engineering *(100 credits)*

Admission Requirements

- GPA: 2.5
- Complete MATH 271, and CSCI 201, with a grade of C- or better

Notes

- Graduation requirement: Students must maintain at least a 2.5 GPA in the Software Engineering program.
- The software engineering program contains a total of 122 credits, including 40 credits of liberal education.
- SE students will be admitted to CSCI 310 and CSCI 411, with courses listed below as satisfying their prerequisites.

Program Requirements

(82 credits) MATH 221, MATH 271, MATH 312, STAT 353, PHYS 234, BIOL 103, ENGL 332 or CMST 341, CSCI 201, CSCI 301, CSCI 310, CSCI 411, CSCI 430, SE 101, SE 221, SE 231, SE 240, SE 245, SE 460, SE 465, SE 470, SE 475, SE 480, SE 444, SE 340, SE 341, SE 490, SE 491.

Electives

Software Engineering Electives (18 credits): Choose 3 courses from : CSCI 220; CSCI 450; SE 412; SE 413; SE 466; SE 476; SE 477; SE 478; SE 479; SE 482. Math Electives: Choose 2 courses from: MATH 222; MATH 320; MATH 304; STAT 321. Basic Science Electives: Choose 1 course from Goal Area 3.

The upper division writing requirement is met through the following courses: SE 460 and SE 490 and SE 491.

Program Student Learning Outcomes

- An ability to apply knowledge of mathematics, science, and engineering.

- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, and safety.
- An ability to function on multidisciplinary teams.
- An ability to identify, formulate, and solve real-world problems.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively. An ability to work in one or more significant application domains. An ability to manage the development of software systems.
- A recognition of the need for, and an ability to engage in life-long learning.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- An ability to appropriately analyze, design, verify, validate, implement, apply, and maintain software systems.
- An ability to apply discrete mathematics, probability and statistics, and relevant topics in computer science and support disciplines to complex software systems.

Minor - Computer Science (BA, BS) *(27 credits)*

Program Requirements

CSCI 201, CSCI 220, CSCI 301, CSCI 310, CSCI 320, MATH 221, MATH 271.

Program Student Learning Outcomes

- Apply structured principles and good practices to the task of developing software systems.
- Understand how hardware provides the necessary structure for execution and influences the design of software.
- Understand general operating system functions and structures, comprehend system capabilities, and modify systems to meet specifications.
- Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
- Understand the professional code of ethics and the need to conduct themselves in a professional manner.
- Apply formal methods to the process of constructing systems and appreciate the need to study and develop such methods.
- Analyze the processes used when designing a system and employ established frameworks to evaluate the completed work.
- Apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.

Minor - Information Technology Security (BA, BS) *(26 credits)*

- Admission RequirementsBefore applying to the minor, students must complete the following with no grade below a C and with a 2.50 or higher average GPA: CNA 201, CNA 267, CNA 268, CNA 397.

Program Requirements

(23 credits) CNA 201, CNA 267, CNA 268, CNA 397, CNA 425, CNA 426, CNA 437, CNA 438.

Electives

Select one (3 credits): CNA 430, CNA 432, CNA 440, IS 473 or CNA 473.

Program Student Learning Outcomes

- Write correct, well documented and readable programs.
- Describe and use networks.
- Describe and use operating systems.
- Articulate ethical and professional standards of behavior.
- Communicate effectively in written and oral exchanges.
- Design and implement secure network architecture based on security policies.
- Identify and correct security weaknesses in operating systems, networks, and applications.
- Demonstrate understanding of theoretical foundations of security by solving problems.

Minor - Computer Science-BES *(27 credits)*

Program Requirements
CSCI 201, CSCI 220, CSCI 301, CSCI 310, CSCI 320, MATH 221, MATH 271.

Program Student Learning Outcomes

- Apply structured principles and good practices to the task of developing software systems.
- Understand how hardware provides the necessary structure for execution and influences the design of software.
- Understand general operating system functions and structures, comprehend system capabilities, and modify systems to meet specifications.
- Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
- Understand the professional code of ethics and the need to conduct themselves in a professional manner.
- Apply formal methods to the process of constructing systems and appreciate the need to study and develop such methods.
- Analyze the processes used when designing a system and employ established frameworks to evaluate the completed work.
- Apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.

Minor - Computing *(16-17 credits)*

Admission Requirements

- GPA: 2.5 GPA

Program Requirements
11 credits: GENG 102 or CNA 267, CSCI 172, CSCI 201, CSCI 361

Electives
5-6 credits from: CSCI 411, CNA 474, AHS 367, AHS 467, AHS 432, AHS 434, ECE 421, ECE 422, IS 443, STAT 304, STAT 325

Minor - Information Technology Security-BES *(26 credits)*

- Admission RequirementsBefore applying to the minor, students must complete the following with no grade below a C and with a 2.50 or higher average GPA: CNA 201, CNA 267, CNA 268, CNA 397.

Program Requirements
(23 credits) CNA 201, CNA 267, CNA 268, CNA 397, CNA 425, CNA 426, CNA 437, CNA 438.

Electives
Select one (3 credits): CNA 430, CNA 432, CNA 440, IS 473 or CNA 473.

Program Student Learning Outcomes

- Write correct, well documented and readable programs.
- Describe and use networks.
- Describe and use operating systems.
- Articulate ethical and professional standards of behavior.
- Communicate effectively in written and oral exchanges.
- Design and implement secure network architecture based on security policies.
- Identify and correct security weaknesses in operating systems, networks, and applications.
- Demonstrate understanding of theoretical foundations of security by solving problems.

Software Engineering (SE)

Computer Science and Information Technology

Chairperson: Ramnath Sarnath
Address: 139 Engineering & Computing Center
Phone: 320.308.4966
Email: csit@stcloudstate.edu
Website: www.stcloudstate.edu/csit

BS - Software Engineering *(100 credits)*

Notes

- Students must maintain at least a 2.5 GPA in the Software Engineering required program courses.
- The software engineering program contains a total of 122 credits, including 40 credits of liberal education.

- Students can take upper level (400 level) courses after completing MATH 271, CSCI 201, and SE 240 with a grade of C- or better, and with GPA within the program of at least 2.5.

Program Requirements
(75 credits) MATH 221, MATH 271, MATH 312, STAT 353, ENGL 332 or CMST 341, CSCI 201, CSCI 301, SE 210 or CSCI 310, SE 211 or CSCI 411, CSCI 430, SE 101 or GENG 101, SE 221, SE 231, SE 240, SE 345, SE 460, SE 465, SE 470, SE 475, SE 480, SE 444, SE 340, SE 341, SE 490, SE 491.

Electives
Software Engineering Electives (25 credits): Choose 3 courses from: CSCI 220, CSCI 450, SE 412, SE 413, SE 466, SE 276, SE 477, SE 478, SE 479, SE 482. Math Electives: Choose 2 courses from: MATH 222, MATH 320, MATH 304, STAT 321. Basic Science Electives: Choose 1 course from Goal Area 3 and 7 credits from ASTR, BIOL, CHEM, or PHYS courses with the consent of the advisor.

The upper division writing requirement is met through the following courses: SE 460 and SE 490 and SE 491.

Program Student Learning Outcomes

- An ability to apply knowledge of mathematics, science, and engineering.
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, and safety.
- An ability to function on multidisciplinary teams.
- An ability to identify, formulate, and solve real-world problems.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively. An ability to work in one or more significant application domains. An ability to manage the development of software systems.
- A recognition of the need for, and an ability to engage in life-long learning.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- An ability to appropriately analyze, design, verify, validate, implement, apply, and maintain software systems.
- An ability to apply discrete mathematics, probability and statistics, and relevant topics in computer science and support disciplines to complex software systems.

MS

Computer Science and Information Technology

Chairperson: Ramnath Sarnath
Address: 139 Engineering & Computing Center
Phone: 320.308.4966
Email: csit@stcloudstate.edu
Website: www.stcloudstate.edu/csit

MS - Computer Science *(30-36 credits)*

Admission Requirements

- GPA: 3.00
- Those without undergraduate computer science background are required to take CSCI 201, CSCI 220, and MATH 271, and preparatory courses CSCI 591, CSCI 592, and CSCI 593.
- Those deemed to have inadequate preparation, or those whose ability to perform well at the graduate level is in doubt, are required to take preparatory courses or test out of CSCI 591, CSCI 592, and CSCI 593.

Notes

- A course may not be used to satisfy more than one requirement.
- Students who are required to take preparatory classes (CSCI 591, CSCI 592 and CSCI 593) must complete the courses with grades of B or higher. Failure to do so will render them ineligible to continue in the program.
- A student who successfully completes a course may not afterwards take, for credit, any prerequisite to that course.

Plan A
Option(s): Thesis
Credits: 30
Core: 10 credits: CSCI 610, CSCI 620, CSCI 681, and one of CSCI 502, CSCI 504, or CSCI 506.
Electives: 14 credits: Any three graduate CSCI courses (9 credits), excluding arranged courses. At least one course must be at the 600 level. 5 credits of additional coursework taken with permission of advisor. Up to 3 credits may be internship (CSCI 644) or arranged preparatory courses (CSCI 591, CSCI 592 and CSCI 593).
Research: 6 credits: CSCI 699.

Plan B
Option(s): Starred Paper(s)
Credits: 32
Core: 10 credits; CSCI 610, CSCI 620, CSCI 681; one of CSCI 502, CSCI 504, or CSCI 506.
Electives: 19 credits (at least 6 credits at the 600 level): Any four graduate CSCI courses (12 credits), excluding arranged courses. 7 credits of additional coursework taken with permission of advisor. Up to 4 credits may be internship (CSCI 644) or arranged preparatory courses (CSCI 591, 592 and 593).
Research: 3 credits: CSCI 697

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: 10 credits: CSCI 610, CSCI 620, CSCI 681, and one of CSCI 502, CSCI 504, or CSCI 506.
Electives: 25 credits (at least 10 credits at the 600 level): 15 credits of graduate CSCI courses, excluding arranged courses (at least 3 credits at the 600 level). 10 credits of additional coursework taken with permission of advisor (at least 4 credits at the 600 level); up to 5 credits may be internship (CSCI 644) or arranged preparatory courses (CSCI 591, 592 and 593).
Research: 1 credit: CSCI 600

Program Student Learning Outcomes

- Apply structured principles and good practices to the task of developing software systems.
- Understand how hardware provides the necessary structure for execution and influences the design of software.
- Understand general operating system functions and structures, comprehend system capabilities, and modify systems to meet specifications.
- Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
- Understand the professional code of ethics and the need to conduct themselves in a professional manner.
- Apply formal methods to the process of constructing systems and appreciate the need to study and develop such methods.
- Analyze the processes used when designing a system and employ established frameworks to evaluate the completed work.
- Apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.

Professional Science Masters - Software Engineering *(33-36 credits)*

Admission Requirements

- GPA: 3.0

Notes

- Applicants with a limited background in Software Engineering but a strong undergraduate record and competitive GRE will have to successfully complete undergraduate Software Engineering classes under the supervision of an adviser before being admitted to the PSMSE program.

Plan B
Option(s): Capstone
Credits: 33
Core: (18 credits) SE 560, SE 565, SE 640, SE 641, SE 670, SE 680.
Electives: (12 credits) Select four courses from two of the following concentrations: Data Science and Analytics SE 512 and SE 513; Enterprise Architecture SE 578 and SE 579; Software Cybersecurity CNA 531 and SE 550; Business and Administration (two of the following) MBA 617, MBA 652, or MBA 655.
Research: (3 credits) SE 685.

Plan C
Option(s): Portfolio/Internship
Credits: 36
Core: (18 credits) SE 560, SE 565, SE 640, SE 641, SE 670, SE 680
Electives: (12 credits) Select four courses from two of the following concentrations: Data Science and Analytics SE 512 and SE 513; Enterprise Architecture SE 578 and SE 579; Software Cybersecurity CNA 531 and SE 550; Business and Administration (two of the following) MBA 617, MBA 652, or MBA 655.
Research: (6 credits) SE 644.

PSM of Software Engineering (MS)

PSM

Computer Science and Information Technology

Chairperson: Ramnath Sarnath
Address: 139 Engineering & Computing Center
Phone: 320-308.4966
Email: csit@stcloudstate.edu
Website: www.stcloudstate.edu.edu/csit

Professional Science Masters - Software Engineering *(33-36 credits)*

Admission Requirements

- GPA: 3.0

Notes

- Applicants with a limited background in Software Engineering but a strong undergraduate record and competitive GRE will have to successfully complete undergraduate Software Engineering classes under the supervision of an adviser before being admitted to the PSMSE program.

Plan B
Option(s): Capstone
Credits: 33
Core: (18 credits) SE 560, SE 565, SE 640, SE 641, SE 670, SE 680.
Electives: (12 credits) Select four courses from two of the following concentrations: Data Science and Analytics SE 512 and SE 513; Enterprise Architecture SE 578 and SE 579; Software Cybersecurity CNA 531 and SE 550; Business and Administration (two of the following) MBA 617, MBA 652, or MBA 655.
Research: (3 credits) SE 685.

Plan C
Option(s): Portfolio/Internship
Credits: 36
Core: (18 credits) SE 560, SE 565, SE 640, SE 641, SE 670, SE 680
Electives: (12 credits) Select four courses from two of the following concentrations: Data Science and Analytics SE 512 and SE 513; Enterprise Architecture SE 578 and SE 579; Software Cybersecurity CNA 531 and SE 550; Business and Administration (two of the following) MBA 617, MBA 652, or MBA 655.
Research: (6 credits) SE 644.

Criminal Justice

BA and Minor

Criminal Justice

Chairperson: Mario L. Hesse
Address: 257 Stewart Hall
Phone: 320.308.4101
Email: criminaljustice@stcloudstate.edu
Website: www.stcloudstate.edu/criminaljustice

BA - Criminal Justice *(45-49 credits)*

Admission Requirements

- GPA: 2.65
- To be eligible to apply for the BA in CJS or a BA in CJS with a concentration, students must have completed 12 credits at SCSU, including CJS 111, with an earned GPA of 2.65 or higher.

Notes

- To be eligible to graduate with a BA in CJS or a BA in CJS with a concentration, students must have a GPA of 2.5 or higher in CJS courses.
- Licensure: The Minnesota Peace Officers Standards and Training (POST) Board criteria states that students who wish to pursue a career in law enforcement in the State of Minnesota must meet licensing requirements for both education and training.
- To be eligible to attend the law enforcement skills training, students

must complete CJS 111, CJS 421, CJS 422, and CJS 431 with a minimum GPA of 2.65. Students must also complete a Minnesota Emergency Services Regulatory Board (EMSRB) approved First Responder level or higher certification.

- PSY 201 has the prerequisites: PSY 115 and MATH 112 or equivalent; STAT 219 has prerequisites: MATH 193 or STAT 193 or satisfactory math placement score.

Program Requirements

30-43 Credits: Core (all concentrations) CJS 111, CJS 411, CJS 415, CJS 430, CJS 431, CJS 433, CJS 486, CJS 487, CJS 488, and PSY 200 and PSY 201, or SOC 304, or STAT 219. Corrections and Reentry Concentration: (9 credits) CJS 441, CJS 444, CJS 470. Victim Services Concentration: (9 credits) CJS 444, CJS 480, CJS 482. 21st Century Policing: (9 credits) CJS 420, CJS 444, CJS 465. Students electing the non-concentration, elective option are required to complete 15 credits from the list of CJS approved elective courses.

Electives

6-15 credits (CJS approved elective courses): CJS 305, CJS 325, CJS 401, CJS 420, CJS 421, CJS 422, CJS 425, CJS 441, CJS 444 (max. of 16 credits), CJS 445, CJS 446, CJS 450, CJS 455, CJS 457, CJS 461, CJS 465, CJS 470, CJS 473, CJS 480, CJS 482, CJS 485, CJS 489, CJS 490, CJS 496, CJS 199-499 (1-16 credits); CHEM 207, CHEM 307; CMST 412; ECON 381; ENGL 216; GEOG 490; HLTH 405; HIST 350; PHIL 212, PHIL 482; POL 413, POL 491, POL 492; SOC 366, SOC 367, SOC 368; SSCI 460, STAT 219. Courses required in the core or selected concentration cannot count as electives.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CJS 488.

Program Student Learning Outcomes

- Administration of Justice: Contemporary criminal justice system, major systems of social control and their policies and practices; ethics, victimology, juvenile justice; compariative criminal justice.
- Corrections: History, theory, practice and legal environment, development of correctional philosophy, ethics, incarceration, diversions, community-based corrections, treatment of offenders.
- Theories of Crime and Justice: The nature and causes of crime, typologies, offenders, and victims; policy implications of theories; ethics; legal and criminal justice system responses to crime and victimization.
- Law Adjudication: Criminal law, criminal procedures, ethics, prosecution, defense, and court procedures and decision-making.
- Law Enforcement: History, theory, practice and legal environment, police organization, discretion, ethics and subculture.
- Research and Analytic Methods: Quantitative and qualitative methods for conducting and analyzing criminal justice research in a manner appropriate for undergraduate students. Application of data analysis and statistics for measuring cirme and assessing criminal justice system responses to crime.

Minor - Criminal Justice *(21 credits)*

Program Requirements

9 Credits: CJS 111, CJS 411, CJS 415.

Electives

12 credit hours of elective courses must be chosen from those courses offered within the program major.

MS

Criminal Justice

Chairperson: Mario L. Hesse
Address: 257 Stewart Hall
Phone: 320.308.4101
Email: criminaljustice@stcloudstate.edu
Website: www.stcloudstate.edu/criminaljustice

MS - Criminal Justice *(36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.

Plan A

Option(s): Thesis
Credits: 36

Core: 9 credits: CJS 611, CJS 660, CJS 689.
Electives: 15 credits: Choose from the following list of graduate courses or from graduate courses with graduate advisor approval: CEEP 651, CEEP 666, CEEP 668, CEEP 672, CEEP 678; CJS 600, CJS, 601, CJS 644 (a maximum of 6 credits may be applied), CJS 650, CJS 661, CJS 681, CJS 689 (may be repeated for a maximum of 9 credits); CMTY 522, CMTY 551, CMTY 552; GERO 530, GERO 620; MPA 602, MPA 603, MPA 604, MPA 606, MPA 620, MPA 621; PHIL 582; SW 610, SW 634.
Research: 12 credits: CJS 677 (3 credits), CJS 679 (3 credits), CJS 699 (6 credits).

Plan C
Option(s): Portfolio/Project | Portfolio/Internship
Credits: 36
Core: 9 credits: CJS 611, CJS 660, CJS 689.
Electives: 15 credits: Choose from the following list of graduate courses or from graduate courses with graduate advisor approval: CEEP 651, CEEP 666, CEEP 668, CEEP 672, CEEP 678; CJS 600, CJS 601, CJS 650, CJS 661, CJS 681, CJS 689 (may be repeated for a maximum of 9 credits); CMTY 522, CMTY 551, CMTY 552; GERO 530, GERO 620; MPA 602, MPA 603, MPA 604, MPA 606, MPA 620, MPA 621; PHIL 582; SW 610, SW 634.
Research: 12 credits: CJS 644 (6 credits), CJS 677 (3 credits), CJS 679 (3 credits).

Program Student Learning Outcomes

- Administration of Justice: Contemporary criminal justice system, major systems of social control and their policies and practices; ethics, victimology, juvenile justice; compariative criminal justice.
- Corrections: History, theory, practice and legal environment, development of correctional philosophy, ethics, incarceration, diversions, community-based corrections, treatment of offenders.
- Theories of Crime and Justice: The nature and causes of crime, typologies, offenders, and victims; policy implications of theories; ethics; legal and criminal justice system responses to crime and victimization.
- Law Adjudication: Criminal law, criminal procedures, ethics, prosecution, defense, and court procedures and decision-making.
- Law Enforcement: History, theory, practice and legal environment, police organization, discretion, ethics and subculture.
- Research and Analytic Methods: Quantitative and qualitative methods for conducting and analyzing criminal justice research in a manner appropriate for undergraduate students. Application of data analysis and statistics for measuring cirme and assessing criminal justice system responses to crime.

MS - Public Safety Executive Leadership *(36 credits)*

Admission Requirements

- GPA: 2.75
- Public safety executive leadership degree candidates must have had at least two years full-time paid employment by a public safety-related organization for admission consideration. (See Criminal Justice Department website for exceptions).
- The GRE is not required.

Plan B
Option(s): Capstone
Credits: 36
Core: 24 credits from PSEL 610, PSEL 620, PSEL 640, PSEL 660, PSEL 680, PSEL 690
Electives: 12 credits selected from: CJS 511, CJS 515, CJS 520, CJS 530, CJS 531, CJS 533, CJS 545, CJS 550, CJS 555, CJS 589, CJS 600, CJS 650, CJS 660, CJS 661, CJS 681, MGMT 550, MGMT 551, MGMT 552, MGMT 553, MGMT 566, MGMT 567, COMM 516, COMM 520, COMM 524, COMM 534, COMM 605, MBA 667, PSY 543, PSY 573, PSY 590, SOC 556, SOC 560, SOC 689. Additional electives may be substituted with advisor approval.
Research:

Program Student Learning Outcomes

- Students will be able to explain the major contemporary theories and strategies of leadership within public safety systems.
- The student will be able to assess present strengths and challenges regarding structured financial management. The student will have a clear understanding

and advance the skill sets involved in strategies and budgeting in both personal and professional lives.
- Students will be able, via journaling and examinations, to explain their current leadership style, and leadership and communication skills they have developed for personal and professional growth.
- Students will be able to explain four concepts, skills or strategies for improving their performance in personnel management, budgeting and/or strategic planning.

Digital Humanities

Graduate Certificate

Digital Humanities

Director: Betsy Glade
Address: 283 Stewart Hall
Phone: 320-308-3165
Email: history@stcloudstate.edu

Certificate - Digital Humanities *(12 credits)*

- Admission RequirementsBachelor's Degree
- A minor or major in the humanities or social sciences

Notes

- Most of the work in this program will require the use of computers.

Program Requirements
12 Credits: DH 502, DH 503, DH 504, DH 505

Economics

BA, BS and Minor

Economics

Chairperson: Nathan Hampton
Address: 386 Stewart Hall
Phone: 320.308.2227
Email: economics@stcloudstate.edu
Website: www.stcloudstate.edu/economics

BA - Business Economics *(48-51 credits)*

- Admission RequirementsCompletion of ECON 205 and ECON 206 with a C or better.

Notes

- Minimum grade of C (2.0) in each of: ECON 205, ECON 206, ECON 405, ECON 406, and ECON 481. Minimum grade of C- in core mathematics (MATH 112 or 115 or 196 or 211 or higher) and core statistics (IS 242 or STAT 219 or higher) courses.
- 5-Year B.A./M.S. For information about the 5-year track, see M.S. Five-Year Track in Economics.

Program Requirements
39-42 credits: ECON 205; ECON 206; MATH 112 or MATH 115 or MATH 196 or MATH 211 or equivalent; IS 242 or STAT 219 or STAT 242 or equivalent; ECON 405; ECON 406; ECON 481; ECON 417; ECON 470; ACCT 291; ACCT 292; FIRE 371; FIRE 373 (check the catalog for prerequisites).

Electives
9 Credits: Selected from 400-level ECON courses not in the core. ECON 350 or ECON 360 may be substituted for one 400-level course. A maximum of two of the following non-economics courses may be substituted for ECON electives: ANTH 372, FIRE 471, FIRE 473, FIRE 474, HIST 345, MGMT 365, MGMT 462, MGMT 470, STAT 304, STAT 427, STAT 433 (check the catalog for prerequisites).

The senior seminar (ECON 481) fulfills the University's Upper Division Writing Requirement and is mandatory.

Program Student Learning Outcomes

- Understand the measurement and determination of aggregate prices and employment, money and banking process, fiscal policy, monetary policy, and economic growth.
- Understand forces behind economic decision-making, marginal analysis, consumer and producer behavior in markets, price and output under

different market structures, input markets, and policy analysis.
- Understand core areas of microeconomics and macroeconomics. Introductory understanding of the theoretical principles of microeconomics and macroeconomics.
- Understand the application of economic models to real-world problems.
- Understand econometrics and/or forecasting and application of these techniques to a capstone research study.
- Become familiar with the many competing goals societies face. Students will learn that diversity exists regarding the values people place on alternative goals, and the tradeoffs that exist when public policy attempts to further these goals.
- Understand the application of economic principles such as cost-benefit analysis to contemporary local, national and global public-policy issues in the students' elective coursework.
- Learn the professional expectations of the discipline, as well as incorporating the skills of related disciplines contributing to economic knowledge.
- Able to combine economic models with statistical tools to conduct empirical analyses.
- Students will have an understanding of human behavior, market behavior, and the behavior of the aggregate economy with the ability to apply this set of tools in various market opportunities, pursue graduate work in economics, and pursue graduate work in related disciplines.

BA - Economics *(45-48 credits)*

- Admission RequirementsCompletion of ECON 205 and ECON 206 with a C or better.

Notes

- Minimum grade of C (2.0) in each of: ECON 205, ECON 206, ECON 405, ECON 406, and ECON 481. Minimum grade of C- in core mathematics (MATH Math 112 or 115 or 196 or 211 or higher) and statistics (IS 242 or STAT 219 or higher) courses.
- 5-Year B.A./M.S. For information about the 5-year track, see M.S. Five-Year Track in Economics.

Program Requirements

24-27 credits: ECON 205; ECON 206; MATH 112 or MATH 115 or MATH 196 or MATH 211 or equivalent; IS 242 or STAT 219 or STAT 242, or equivalent; ECON 405; ECON 406; ECON 470 or ECON 485; ECON 481.

Electives

21 Credits: Selected from 400-level ECON courses not in the core. ECON 350 or ECON 360 may be substituted for one 400-level course. With approval of the adviser, the following courses (all with required prerequisites) may be substituted for ECON electives: MATH 221, MATH 222, MATH 312, MATH 321. Alternatively, a maximum of two of the following may be substituted for ECON electives: ANTH 372, FIRE 371, FIRE 373, HIST 345, POL 313, POL 380, POL 463, STAT 304, STAT 427 (check the catalog for prerequisites).

The senior seminar (ECON 481) fulfills the University's Upper Division Writing Requirement and is mandatory.

Program Student Learning Outcomes

- Understand the measurement and determination of aggregate prices and employment, money and banking process, fiscal policy, monetary policy, and economic growth.
- Understand forces behind economic decision-making, marginal analysis, consumer and producer behavior in markets, price and output under different market structures, input markets, and policy analysis.
- Understand core areas of microeconomics and macroeconomics. Introductory understanding of the theoretical principles of microeconomics and macroeconomics.
- Understand the application of economic models to real-world problems.

- Understand econometrics and/or forecasting and application of these techniques to a capstone research study.
- Become familiar with the many competing goals societies face. Students will learn that diversity exists regarding the values people place on alternative goals, and the tradeoffs that exist when public policy attempts to further these goals.
- Understand the application of economic principles such as cost-benefit analysis to contemporary local, national and global public-policy issues in the students' elective coursework.
- Learn the professional expectations of the discipline, as well as incorporating the skills of related disciplines contributing to economic knowledge.
- Able to combine economic models with statistical tools to conduct empirical analyses.
- Students will have an understanding of human behavior, market behavior, and the behavior of the aggregate economy with the ability to: apply this set of tools in various market opportunities, pursue graduate work in economics, and pursue graduate work in related disciplines.

BS - Mathematical Economics *(61 credits)*

- Admission RequirementsCompletion of ECON 205, ECON 206, MATH 221, MATH 222, STAT 239, STAT 321.
-

Notes

- C or better in ECON 205, ECON 206, MATH 221, MATH 222, STAT 239, STAT 321.

Program Requirements

ECON 205, ECON 206, ECON 405, ECON 406, ECON 485, ECON 486, ECON 481, ECON 497 or ECON 498, MATH 221 (5 Cr.), MATH 222 (4 Cr.), MATH 312, MATH 321 (4 Cr.), MATH 353, STAT 239, STAT 304, STAT 321, STAT 417, STAT 421, STAT 447, STAT 427 or ECON 470. (This program does not offer a minor).

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing ECON 481, ECON 497 or ECON 498.

Program Student Learning Outcomes

- Students will build a solid foundation in economics and applications, mathematics, and statistics.
- Students will be able to apply mathematical methods to study issues in business, economics and/or finance.
- Students will be able to apply econometric and statistical methods to study issues in business, economics and/or finance.

BS - Social Studies: Economics *(21 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Students in this Concentration are not required to take ECON 201 in their Social Studies Licensing Core.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements

Social Studies Licensing Core: ANTH 250; GEOG 253, GEOG 270; HIST 140 or HIST 141, HIST 106 (global

only), HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SOC 160; SST 253, SST 441, SST 453. Economics Core: ECON 205, ECON 206, ECON 360, ECON 405, ECON 406.

Electives
One of ECON 471 or 474, and one of the following: ECON 417, ECON 420, ECON 442, ECON 451, ECON 460, ECON 461, ECON 465, ECON 472, ECON 473.

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

Minor - Economics *(18 credits)*

Notes

- C or better in ECON 205, ECON 206.

Program Requirements
ECON 205, ECON 206.

Electives
12 Credits: Electives from 400-level ECON courses or one of ECON 350 or ECON 360.

BA/MS - 5-year BA-Economics/MS-Applied Economics *(54 credits)*

- Admission RequirementsCompletion of ECON 205, ECON 206

Notes

- Minimum grade of "B" or better in each of ECON 205, ECON 206, ECON 405, ECON 406, ECON 586 and ECON 587.
- Discuss the option with the Applied Economics graduate coordinator during the sophomore year. Be ready to apply during the last semester of junior year. Students are usually admitted to the track during their last semester as a junior and are granted early conditional admission to graduate school upon completion of a special undergraduate core program.

Program Requirements
33 credits: ECON 205, ECON 206, ECON 405, ECON 406, ECON 481, MATH 112, MATH 115, MATH 211, IS 242, ECON 586*, ECON 587*. 6 credits: Choose two from ECON 561*, ECON 565*, ECON 572*, ECON 574*, FIRE 574*, MGMT 550*, or MGMT 567*. *These courses require Graduate Dean approval while student is still an undergraduate.

Electives
15 credits: Any ECON 300-400 not listed above (or as a 500-level course).

Program Student Learning Outcomes

- Understand the measurement and determination of aggregate prices and employment, money and banking process, fiscal policy, monetary policy, and economic growth.
- Understand forces behind economic decision-making, marginal analysis, consumer and producer behavior in markets, price and output under different market structures, input markets, and policy analysis.
- Understand core areas of microeconomics and macroeconomics. Introductory understanding of the

theoretical principles of microeconomics and macroeconomics.
- Understand the application of economic models to real-world problems.
- Understand econometrics and/or forecasting and application of these techniques to a capstone research study.
- Become familiar with the many competing goals societies face. Students will learn that diversity exists regarding the values people place on alternative goals, and the tradeoffs that exist when public policy attempts to further these goals.
- Understand the application of economic principles such as cost-benefit analysis to contemporary local, national and global public-policy issues in the students' elective coursework.
- Learn the professional expectations of the discipline, as well as incorporating the skills of related disciplines contributing to economic knowledge.
- Able to combine economic models with statistical tools to conduct empirical analyses.
- Students will have an understanding of human behavior, market behavior, and the behavior of the aggregate economy with the ability to apply this set of tools in various market opportunities, pursue graduate work in economics, and pursue graduate work in related disciplines.

MS

Economics

Chairperson: Nathan Hampton
Address: 386 Stewart Hall
Phone: 320.308.2227
Email: economics@stcloudstate.edu
Website: www.stcloudstate.edu/economics

MS - Applied Economics *(33-36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE or GMAT is required of all applicants who possess only a baccalaureate degree. The GRE or GMAT is recommended for applicants with a post-baccalaureate degree. Recent GRE or GMAT scores are preferred.
- Prerequisites or equivalents: ECON 405 (Intermediate Macroeconomics), ECON 406 (Intermediate Microeconomics), MATH 221 (Calculus 1).

Notes

- Plan A and Plan C options only.
- Plan A has a thesis and ECON 699 requirement. Plan C has an internship and ECON 644 requirement.

Plan A
Option(s): Thesis
Credits: 33-36
Core: 18 credits: ECON 586, ECON 605, ECON 606, ECON 615, ECON 670, ECON 677.
Electives: Complete the Data Analytics Certificate (IA 658, IS 534, STAT 615, STAT 660) or Select 9 credits from the following: ECON 597, ECON 598, ECON 600, ECON 601, ECON 603, ECON 630, ECON 632, ECON 645, ECON 679, ECON 690, FIRE 571, FIRE 572, FIRE 573, MGMT 570.
Research: 6 credits: ECON 699

Plan C
Option(s): Portfolio/Internship
Credits: 36
Core: 18 credits: ECON 586, ECON 605, ECON 606, ECON 615, ECON 670, ECON 677.
Electives: Complete the Data Analytics Certificate (IA 658, IS 534, STAT 615, STAT 660) or Select 12 credits from the following: ECON 597, ECON 598, ECON 600, ECON 601, ECON 603, ECON 630, ECON 632, ECON 645, ECON 679, ECON 690, FIRE 571, FIRE 572, FIRE 573, MGMT 570.
Research: 6 credits: ECON 644.

Program Student Learning Outcomes

- Able to apply mathematical methods to study masters-level economic theories.
- Able to apply econometric models to test economic theories and analyze business, economic, financial and other related data.
- Able to apply econometric, especially time-series, models to forecast business, economic and financial performance.

- Able to demonstrate knowledge of masters-level micro- and macroeconomic theories.
- Able to use economic analyses to facilitate decision-making within a firm.
- Able to gain real world experience in applying theoretical and/or empirical economic analysis.
- Able to conduct independent economic research.
- Able to demonstrate knowledge in different fields in economics.

MS - Five-Year Track in Economics *(36 credits)*

Admission Requirements

- GPA: 3.3
- An undergraduate core (26 credits) consisting of ECON 205, ECON 206, ECON 405, ECON 406, ECON 481, MATH 115, MATH 221, IS 242 or STAT 219.
- A "B" or better in each of ECON 205, ECON 206, ECON 405, ECON 406, ECON 586 and ECON 587. Note: ECON 586 and ECON 587 are two of the courses students are allowed to double count.
- Students must obtain approval from the graduate dean to take these courses to ensure double counting.

Notes

- Admission Requirements Specific to the Program. Discuss the 4 + 1 option with the Applied Economics graduate coordinator during the sophomore year. Be ready to apply during the last semester as a junior. Students are usually admitted to the track during their last semester as a junior and are granted early conditional admission to graduate school upon completion of a special undergraduate core program.
- The GRE or GMAT is required of all applicants. The GRE or GMAT is also required of applicants with a post-baccalaureate degree. Previous GRE or GMAT scores may be submitted.

Plan A

Option(s): Thesis
Credits: 36
Core: 24 credits: ECON 586, ECON 587, ECON 605, ECON 606, ECON 615, ECON 670, ECON 677, FIRE 571
Electives: 21 credits. Select 6 credits: Any two of the following, which will be double counted for undergraduate and graduate credit: ECON 561, ECON 565, ECON 572, ECON 574, FIRE 571, FIRE 574, MGMT 550, MGMT 567. These courses must be completed before the B.A. can be conferred and would double count toward undergraduate and graduate credits (they are transferred onto the graduate transcript following completion of the B.A.). Select 15 credits: Any other five 300-level or 400-level courses offered by the Economics department. These may not count towards graduate credit.
Research: 6 credits: ECON 699

Plan B

Option(s): Starred Paper(s)
Credits: 36
Core: ECON 586, ECON 587, ECON 605, ECON 606, ECON 615, ECON 670, ECON 677, FIRE 571
Electives: 21 credits Select 6 credits: Any two of the following, which will be double counted for undergraduate and graduate credit: ECON 561, ECON 565, ECON 572, 574, FIRE 571, FIRE 574, MGMT 550, MGMT 567. These courses must be completed before the B.A. can be conferred and would double count toward undergraduate and graduate credits (they are transferred onto the graduate transcript following completion of the B.A.). Select 15 credits: Any other five 300-level or 400-level courses offered by the Economics department. These may not count towards graduate credit.
Research: ECON 630 (6 credits). ECON 697 (3 credits).

Plan C

Option(s): Portfolio/Internship
Credits: 36
Core: ECON 586, ECON 587, ECON 605, ECON 606, ECON 615, ECON 670, ECON 677, FIRE 571
Electives: 21 credits. Select 6 credits: Any two of the following, which will be double counted for undergraduate and graduate credit: ECON 561, ECON 565, ECON 572, ECON 574, FIRE 571, FIRE 574, MGMT 550, MGMT 567. These courses must be completed before the B.A. can be conferred and

would double count toward undergraduate and graduate credits (they are transferred onto the graduate transcript following completion of the B.A.). Select 15 credits: Any other five 300-level or 400-level courses offered by the Economics department.These may not count towards graduate credit.
Research: Internship Requirement. ECON 644 (6 credits).

Program Student Learning Outcomes

- Understand the measurement and determination of aggregate prices and employment, money and banking process, fiscal policy, monetary policy, and economic growth.
- Understand forces behind economic decision-making, marginal analysis, consumer and producer behavior in markets, price and output under different market structures, input markets, and policy analysis.
- Understand core areas of microeconomics and macroeconomics. Introductory understanding of the theoretical principles of microeconomics and macroeconomics.
- Understand the application of economic models to real-world problems.
- Understand econometrics and/or forecasting and application of these techniques to a capstone research study.
- Become familiar with the many competing goals societies face. Students will learn that diversity exists regarding the values people place on alternative goals, and the tradeoffs that exist when public policy attempts to further these goals.
- Understand the application of economic principles such as cost-benefit analysis to contemporary local, national and global public-policy issues in the students' elective coursework.
- Learn the professional expectations of the discipline, as well as incorporating the skills of related disciplines contributing to economic knowledge.
- Able to combine economic models with statistical tools to conduct empirical analyses.
- Students will have an understanding of human behavior, market behavior, and the behavior of the aggregate economy with the ability to apply this set of tools in various market opportunities, pursue graduate work in economics, and pursue graduate work in related disciplines.

Certificate - Data Analytics *(15 credits)*

Admission Requirements

- GPA: 2.75
- Undergraduate degree
- Statistical experience equivalent to IS 242/STAT 242 or equivalent course
- Computer experience including familiarity with spreadsheet software such as Excel
- Programming familiarity in SAS or other language equivalent to STAT 304 or IS 251

Notes

- Preferable to take IS 534 - Introduction to Data Analytics first and STAT 660 - Data Visualization for Analytics last, with other courses in between.
- Preferable to have access to company data so a project using that data can be completed by the end of the certificate.
- Ideally sequencing is a 2-2-1 – with IS 534 - Foundations and IA 658 - Best Practices in Data Management in the fall, ECON 670 – Advanced Economic and Business Forecasting and STAT 615 – Data Mining in the spring, and then STAT 660 – Data Visualization as the final course in summer.

Program Requirements
IS 534, IA 658, STAT 615, ECON 670, STAT 660

Degrees in Economics

BA Degrees

BA - Economics *(46 credits)*

- Admission RequirementsCompletion of ECON 205, ECON 206.

Notes

- Minimum grade of C (2.0) in each of: ECON 205, ECON 206, ECON 405, ECON 406, and ECON 481.
- 5 Year B.A./M.S. For information about the 5-year track, see M.S. Five-Year Track in Economics.

Program Requirements
22 credits: ECON 205, ECON 206, ECON 405, ECON 406, ECON 481; MATH 112, MATH 115 or MATH 211; IS 242.

Electives
24 Credits: Selected from 400 level ECON courses. ECON 350 or ECON 360 may be substituted for one 400 level course. With approval of the adviser, the following courses (all with required prerequisites) may be substituted for ECON electives: MATH 221, MATH 222, MATH 312, MATH 321. Alternatively, a maximum of two of the following may be substituted for ECON electives: ANTH 372, FIRE 371, FIRE 373, HIST 345, POL 313, POL 380, POL 463, STAT 427 (check the catalog for prerequisites).

Program Student Learning Outcomes

- Understand the measurement and determination of aggregate prices and employment, money and banking process, fiscal policy, monetary policy, and economic growth.
- Understand forces behind economic decision-making, marginal analysis, consumer and producer behavior in markets, price and output under different market structures, input markets, and policy analysis.
- Understand core areas of microeconomics and macroeconomics. Introductory understanding of the theoretical principles of microeconomics and macroeconomics.
- Understand the application of economic models to real-world problems.
- Understand econometrics and/or forecasting and application of these techniques to a capstone research study.
- Become familiar with the many competing goals societies face. Students will learn that diversity exists regarding the values people place on alternative goals, and the tradeoffs that exist when public policy attempts to further these goals.
- Understand the application of economic principles such as cost-benefit analysis to contemporary local, national and global public-policy issues in the students' elective coursework.
- Learn the professional expectations of the discipline, as well as incorporating the skills of related disciplines contributing to economic knowledge.
- Able to combine economic models with statistical tools to conduct empirical analyses.
- Students will have an understanding of human behavior, market behavior, and the behavior of the aggregate economy with the ability to apply this set of tools in various market opportunities, pursue graduate work in economics, and pursue graduate work in related disciplines.

MS - Five-Year Track in Economics *(36 credits)*

Admission Requirements

- GPA: 3.3
- An undergraduate core (26 credits) consisting of ECON 205, ECON 206, ECON 405, ECON 406, ECON 481, MATH 115, MATH 221, IS 242 or STAT 219.
- A "B" or better in each of ECON 205, ECON 206, ECON 405, ECON 406, ECON 586 and ECON 587. Note: ECON 586 and ECON 587 are two of the courses students are allowed to double count.
- Students must obtain approval from the graduate dean to take these courses to ensure double counting.

Notes

- Admission Requirements Specific to the Program. Discuss the 4 + 1 option with the Applied Economics graduate coordinator during the sophomore year. Be ready to apply during the last semester as a junior. Students are usually admitted to the track during their last semester as a junior and are granted

early conditional admission to graduate school upon completion of a special undergraduate core program.
- The GRE or GMAT is required of all applicants. The GRE or GMAT is also required of applicants with a post-baccalaureate degree. Previous GRE or GMAT scores may be submitted.

Plan A
Option(s): Thesis
Credits: 36
Core: 24 credits: ECON 586, ECON 587, ECON 605, ECON 606, ECON 615, ECON 670, ECON 677, FIRE 571
Electives: 21 credits. Select 6 credits: Any two of the following, which will be double counted for undergraduate and graduate credit: ECON 561, ECON 565, ECON 572, ECON 574, FIRE 571, FIRE 574, MGMT 550, MGMT 567. These courses must be completed before the B.A. can be conferred and would double count toward undergraduate and graduate credits (they are transferred onto the graduate transcript following completion of the B.A.). Select 15 credits: Any other five 300-level or 400-level courses offered by the Economics department. These may not count towards graduate credit.
Research: 6 credits: ECON 699

Plan B
Option(s): Starred Paper(s)
Credits: 36
Core: ECON 586, ECON 587, ECON 605, ECON 606, ECON 615, ECON 670, ECON 677, FIRE 571
Electives: 21 credits Select 6 credits: Any two of the following, which will be double counted for undergraduate and graduate credit: ECON 561, ECON 565, ECON 572, 574, FIRE 571, FIRE 574, MGMT 550, MGMT 567. These courses must be completed before the B.A. can be conferred and would double count toward undergraduate and graduate credits (they are transferred onto the graduate transcript following completion of the B.A.). Select 15 credits: Any other five 300-level or 400-level courses offered by the Economics department. These may not count towards graduate credit.
Research: ECON 630 (6 credits). ECON 697 (3 credits).

Plan C
Option(s): Portfolio/Internship
Credits: 36
Core: ECON 586, ECON 587, ECON 605, ECON 606, ECON 615, ECON 670, ECON 677, FIRE 571
Electives: 21 credits. Select 6 credits: Any two of the following, which will be double counted for undergraduate and graduate credit: ECON 561, ECON 565, ECON 572, ECON 574, FIRE 571, FIRE 574, MGMT 550, MGMT 567. These courses must be completed before the B.A. can be conferred and would double count toward undergraduate and graduate credits (they are transferred onto the graduate transcript following completion of the B.A.). Select 15 credits: Any other five 300-level or 400-level courses offered by the Economics department.These may not count towards graduate credit.
Research: Internship Requirement. ECON 644 (6 credits).

Program Student Learning Outcomes

- Understand the measurement and determination of aggregate prices and employment, money and banking process, fiscal policy, monetary policy, and economic growth.
- Understand forces behind economic decision-making, marginal analysis, consumer and producer behavior in markets, price and output under different market structures, input markets, and policy analysis.
- Understand core areas of microeconomics and macroeconomics. Introductory understanding of the theoretical principles of microeconomics and macroeconomics.
- Understand the application of economic models to real-world problems.
- Understand econometrics and/or forecasting and application of these techniques to a capstone research study.
- Become familiar with the many competing goals societies face. Students will learn that diversity exists regarding the values people place on alternative goals, and the tradeoffs that exist when public policy attempts to further these goals.

- Understand the application of economic principles such as cost-benefit analysis to contemporary local, national and global public-policy issues in the students' elective coursework.
- Learn the professional expectations of the discipline, as well as incorporating the skills of related disciplines contributing to economic knowledge.
- Able to combine economic models with statistical tools to conduct empirical analyses.
- Students will have an understanding of human behavior, market behavior, and the behavior of the aggregate economy with the ability to apply this set of tools in various market opportunities, pursue graduate work in economics, and pursue graduate work in related disciplines.

Educational Leadership & Higher Education

Higher Education Administration MS and Ed.D.

Educational Leadership and Higher Education

Chair: John Eller
Address: B109 Education Building
Phone: 320.308.1532
Website: www.stcloudstate.edu/elhe/

EdD Program Contact Information:
Address: B121 Education Building
Phone: 320-308-4220

MS - Higher Education Administration *(36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is optional.
- Submission of a one- to two-page statement describing their interest and experience in higher education leadership, including their educational and career goals. (This document can be uploaded in the online application within the Statement of Intent section.
- Three letters of reference.
- Resume or curriculum vitae

Plan A
Option(s): Thesis
Credits: 36
Core: HIED 604, HIED 614, HIED 624, HIED 634, HIED 644, HIED 654, HIED 664, HIED 672
Electives:
Research: HIED 674, HIED 694, HIED 699 (6 credits)

Plan B
Option(s): Comprehensive Exam
Credits: 36
Core: HIED 604, HIED 614, HIED 624, HIED 634, HIED 644, HIED 654, HIED 664, HIED 672
Electives:
Research: HIED 674, HIED 694, HIED 684

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: HIED 604, HIED 614, HIED 624, HIED 634, HIED 644, HIED 654, HIED 664, HIED 672
Electives:
Research: HIED 674, HIED 694, HIED 684

Program Student Learning Outcomes

- Leadership - Knowledge of what leadership is, how it has been distinguished from administration, and the ability to develop a practical and personally useful definition of leadership.
- Role Discernment - Appropriate attitudes about leaders and followers and the ability to serve as a courageous follower as well as a skillful leader.
- Organizational Theory and Application - Knowledge of basic organizational theory and the ability to describe accurately the organization one serves, including mission, history, and current developments.
- Organizational Theory and Application - Knowledge of basic organizational theory and the ability to describe accurately the organization one serves, including mission, history, and current developments.
- Program Planning - Ability to collaborate in program planning, including the skill to expand on ideas, keep plans realistic, use institutional goals as criteria, and build in usable assessment. Value of

Learning - Awareness of what learning is and why it must be guarded as the fundamental purpose of the institution.
- Problem Analysis and Resolution - Knowledge of rational models used for problem solving and decision making, and the ability to consider legal and ethical implications.
- Collaboration - Skill at collaboration, including serving on and working with task forces, committees, and administrative units to help them function as high-performance teams.
- Communication - Ability to communicate effectively in a variety of forms, including verbal, written, interpersonal, electronic, etc. Conflict Resolution - Knowledge of basic conflict resolution models and the ability to employ them effectively.
- Budgeting - Knowledge of basic financial planning and accounting methods and the ability to use them for budget development and control. Agent for Change - Knowledge of change theories and skill in responding to, initiating, and managing change.
- Work Environment - Awareness of what constitutes a positive work environment and the ability to work with others in creating such an environment. Professional Development - Positive attitudes about personal renewal and the ability to engage in perpetual learning to become more effective as a postsecondary leader.

EdD - Higher Education Administration *(72 credits)*

Admission Requirements

- GPA: 3.0
- Submission of a resume or curriculum vita reflecting employment and professional accomplishments.
- Submission of a professional writing sample (master's research or thesis, published article, paper prepared for a professional conference, research paper, or written analysis of a professional article).
- Submission of a Statement of Intent.
- The GRE is required.
- Participation in an interview with doctoral program faculty.

Notes

- See program website for application deadlines.
- Up to 12 masters credits may be applied toward elective credits upon approval.

Program Requirements

(30 credits) HIED 800, HIED 801, HIED 803, HIED 804, HIED 805, HIED 806, HIED 810, HIED 813 or HIED 823, HIED 820, HIED 830

Electives

(9 to 21 credits) HIED 812, HIED 814, HIED 821, HIED 822, HIED 880. Additional courses inside or outside of the Higher Education Administration that support the student's career goals. Specific courses will be identified in consultation with the faculty advisor.

Program Student Learning Outcomes

- Demonstrate professional appearance, maturity, self-monitoring, and control of emotions and behavior. Display commitment to the field of higher education administration. Display positive attitude and affect.
- Follow applicable legal and ethical guidelines, including confidentiality. Exhibit sound judgment, trustworthiness, and honesty.
- Express, demonstrate, and enact inclusivity and cultural sensitivity in behaviors and language. Display the ability to develop and maintain positive working relationships with colleagues.
- Foster collaboration and good will among and between constituents and stakeholders, and seek win-win solutions to problems. Use communication behaviors that are appropriate to the setting and to the interpersonal relationships of the communication partners.
- Respect and maintain boundaries of self and others. Demonstrate initiative, resourcefulness, creativity, and vision.

- Delegate responsibilities and authority judiciously and fairly. Reflect independently and incorporate reflective insights into practice.
- Integrate theories of leadership for higher education institutions and develop a personal synthesis for practice. Recognize missions and visions appropriate for a variety of higher education institutions, divisions, departments, and programs, and tie the work of institutions to the missions.
- Understand, explain, and apply the legal and ethical aspects associated with decision-making and problem solving. Demonstrate the ability to lead strategic planning, evaluation, accreditation, and assessment initiatives. Demonstrate a variety of conflict resolution strategies helpful in human resource management.
- Develop financial and accounting plans for budget development and control, and use budgets to accomplish organizational goals. Function as a change agent capable of managing organizational change using a variety of theories and approaches.
- Contribute to organizational culture and climate that encourages positive and productive work. Communicate effectively with internal and external constituents and demonstrate appropriate verbal, written, interpersonal, and electronic communication skills.

Certificate - Higher Education Administration *(15 credits)*

Program Requirements

The program provides coursework leading to eligibility for a graduate certificate. 15 credits: HIED 604, HIED 614, HIED 654, HIED 664, HIED 672.

Program Student Learning Outcomes

- Leadership - Knowledge of what leadership is, how it has been distinguished from administration, and the ability to develop a practical and personally useful definition of leadership.
- Role Discernment - Appropriate attitudes about leaders and followers and the ability to serve as a courageous follower as well as a skillful leader.
- Organizational Theory and Application - Knowledge of basic organizational theory and the ability to describe accurately the organization one serves, including mission, history, and current developments.
- Relationships and Functions - Knowledge of the key administrative offices at the institution, including staff and line functions, reporting relationships, and awareness of the opportunities and limitations of ones own niche.
- Program Planning - Ability to collaborate in program planning, including the skill to expand on ideas, keep plans realistic, use institutional goals as criteria, and build in usable assessment. Value of Learning - Awareness of what learning is and why it must be guarded as the fundamental purpose of the institution.
- Problem Analysis and Resolution - Knowledge of rational models used for problem solving and decision making, and the ability to consider legal and ethical implications.
- Collaboration - Skill at collaboration, including serving on and working with task forces, committees, and administrative units to help them function as high-performance teams.
- Communication - Ability to communicate effectively in a variety of forms, including verbal, written, interpersonal, electronic, etc. Conflict Resolution - Knowledge of basic conflict resolution models and the ability to employ them effectively.
- Budgeting - Knowledge of basic financial planning and accounting methods and the ability to use them for budget development and control. Agent for Change - Knowledge of change theories and skill in responding to, initiating, and managing change.
- Work Environment - Awareness of what constitutes a positive work environment and the ability to work with others in creating such an environment. Professional Development - Positive

attitudes about personal renewal and the ability to engage in perpetual learning to become more effective as a postsecondary leader.

Educational Administration and Leadership M.S. and Ed.D.

Educational Leadership and Higher Education

Chair: John Eller
Address: B109 Education Building
Phone: 320.308.1532
Website: www.stcloudstate.edu/edad

Doctoral Program
Address: B121 Education Building
Phone: 320-308-4220

MS - Educational Administration and Leadership *(31-36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- A baccalaureate degree from an accredited institution is required..

Notes

- Undergraduate GPA is closely reviewed. A large concentration is placed on scholarship within the undergraduate education core.

Plan A
Option(s): Thesis
Credits: 31
Core: 19 credits: EDAD 601, EDAD 610, EDAD 620, EDAD 630, EDAD 640, EDAD 650 (16 credits) and EDAD 670 (3 credits of practicum). Practicum may be waived depending on experience.
Electives:
Research: 12 credits: EDAD 682, CEEP 678 and EDAD 699 (6 credits).

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: 19 credits: EDAD 601, EDAD 610, EDAD 620, EDAD 630, EDAD 640, EDAD 650 (16 credits) and EDAD 670 (3 credits of practicum). Practicum may be waived depending on experience.
Electives: Select 9-12 credits in consultation with advisor.
Research: 6 credits: EDAD 680, EDAD 612.

Program Student Learning Outcomes

- Understands how to facilitate the development, articulation, and implementation of a vision of learning that is shared and supported by the school community.
- Demonstrates capacity to advocate, nurture, and sustain a School culture and an instructional program conducive to student learning.
- Demonstrate the ability to manage the organization operations to produce a safe, efficient and effective learning environment.
- Collaborates with families and community members, responding to diverse community interests and needs and mobilizes resources.
- Understands ethical aspects of school-community relations.
- Responds to, and influences the larger political, social economic, legal and cultural context.

EdD - Education Administration and Leadership, K-12 *(72 credits)*

Admission Requirements

- GPA: 3.0
- Submission of a resume or curriculum vita reflecting employment and professional accomplishments.
- Submission of a professional writing sample (master's research or thesis, published article, paper prepared for a professional conference, research paper, or written analysis of a professional article).
- Submission of a Statement of Intent.
- Participation in an interview with doctoral program faculty that includes writing a short essay.

Notes

- See program website for application deadlines.
- Up to 27 credits (maximum of 12 masters credits and/or 27 sixth-year licensure credits) may be applied toward elective credits upon approval.

Program Requirements
(21 credits): EDAD 803, EDAD 804, EDAD 807, EDAD 815, EDAD 821, EDAD 823, EDAD 824

Electives
(3-30 Credits) EDAD 806, EDAD 814, EDAD 817, EDAD 818, EDAD 825, EDAD 826.

Program Student Learning Outcomes

- Understands how to facilitate the development, articulation, and implementation of a vision of learning that is shared and supported by the school community.
- Demonstrates capacity to advocate, nurture, and sustain a School culture and an instructional program conducive to student learning.
- Demonstrate the ability to manage the organization operations to produce a safe, efficient and effective learning environment
- Collaborates with families and community members, responding to diverse community interests and needs and mobilizes resources.
- Understands ethical aspects of school-community relations.
- Responds to, and influences the larger political, social economic, legal and cultural context.

Community Education Certificate

Educational Leadership and Higher Education
Chair: John Eller
Address: B109 Education Building
Phone: 320.308.1532
Website: www.stcloudstate.edu/edad

Certificate - Community Education Director: Graduate Certificate *(24 credits)*

Admission Requirements

- GPA: 2.75
- A baccalaureate degree from an accredited university.
- Successful completion of 24 credits in the Core courses.
- Successful completion of 320 hours of EDAD 507 Field Experience in Community Education under supervision of a designated University supervisor and a licensed Director of Community Education.
- Completion of EDAD 611 Portfolio Review.

Notes

- The EDAD 507 Field Experience: Community Education course is taken only with permission from the student's advisor and with consideration that the student has completed at least 9 credits of core courses prior to enrolling in the field experience. With advisor approval, students may transfer up to 10 credits from another regionally accredited institution. The Field Experience may not be a transfer course.
- See program website for additional information.

Program Requirements
The program provides coursework leading to eligibility for a graduate certificate. 24 credits: EDAD 502, EDAD 507, EDAD 509, EDAD 601, EDAD 611, EDAD 620, EDAD 630, EDAD 640, EDAD 650

Specialist and Graduate Certificate in Sixth Year Program: Educational Administration and Leadership leading to Licensure

Educational Leadership and Higher Education
Chair: John Eller
Address: B109 Education Building
Phone: 320.308.1532
Website: www.stcloudstate.edu/edad

Specialist - Educational Administration and Leadership *(36 credits)*

Admission Requirements

- GPA: 3.00
- Master of Science in Education Administration and Leadership or an acceptable equivalent is required.
- The GRE is not required.

Notes

- A field experience may be part of this program (320 hours with 4 credits Field Experience and 1 credit Portfolio review).
- May lead to administration licensure.
- A written thesis is required.
- It is recommended that specialist students with a master's outside of educational administration take EDAD 620, EDAD 630, EDAD 640, and EDAD 650.

Program Requirements

Research (9): EDAD 686, EDAD 694, CEEP 678. Administrative (15): EDAD 609, EDAD 612, EDAD 619, EDAD 622, EDAD 631, EDAD 652, EDAD 657. Administrative Specialty (8): EDAD 601, EDAD 605, EDAD 608, EDAD 611, EDAD 613, EDAD 616. Field Experience (4, 320 hours): EDAD 674, EDAD 676, EDAD 678.

Program Student Learning Outcomes

- Understands how to facilitate the development, articulation, and implementation of a vision of learning that is shared and supported by the school community.
- Demonstrates capacity to advocate, nurture, and sustain a School culture and an instructional program conducive to student learning.
- Demonstrate the ability to manage the organization operations to produce a safe, efficient and effective learning environment.
- Collaborates with families and community members, responding to diverse community interests and needs and mobilizes resources.
- Understands ethical aspects of school-community relations.
- Responds to, and influences the larger political, social economic, legal and cultural context.

Certificate - Sixth-Year Licensure Programs *(30 credits)*

Admission Requirements

- GPA: 3.00
- The GRE is not required.
- A Master of Science in Education Administration and Leadership or an acceptable equivalent is required. See program website for exceptions.

Notes

- Apply for admission to the Sixth-Year Graduate Certificate Programs through the School of Graduate Studies.
- Students must register for EDAD 611 for each separate field experience.
- It is recommended that sixth year students with a master's outside of educational administration take EDAD 620, EDAD 630, EDAD 640 and EDAD 650.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate. Administrative Core (15): EDAD 609, EDAD 612, EDAD 619, EDAD 622, EDAD 631, EDAD 633, EDAD 652, EDAD 657. Administrative Specialty (8): EDAD 601, EDAD 605, EDAD 608, EDAD 611, EDAD 613, EDAD 616, EDAD 632. Field Experience (3-4): EDAD 674, EDAD 676, EDAD 678. Electives (3): Select electives in consultation with the graduate advisor.

Program Student Learning Outcomes

- Understands how to facilitate the development, articulation, and implementation of a vision of learning that is shared and supported by the school community.

- Demonstrates capacity to advocate, nurture, and sustain a School culture and an instructional program conducive to student learning.
- Demonstrate the ability to manage the organization operations to produce a safe, efficient and effective learning environment
- Collaborates with families and community members, responding to diverse community interests and needs and mobilizes resources.
- Understands ethical aspects of school-community relations.
- Responds to, and influences the larger political, social economic, legal and cultural context.

Electrical & Computer Engineering

BS

Electrical and Computer Engineering

Chairperson: Md (Mahbub) Hossain
Address: 211 Engineering & Computing Center
Phone: 320.308.3252
Website: www.stcloudstate.edu/ece

BS - Computer Engineering *(106 credits)*

Admission Requirements

- GPA: 2.50
- Prerequisite courses must be completed before admission to the major: GENG 101, GENG 102, ECE 201, ECE 220, ENGL 191, MATH 221, MATH 222, MATH 271, PHYS 234 and PHYS 235 and CSCI 201 with a grade point average (GPA) of at least 2.5 and with an overall GPA of 2.5
- Students must earn a C or better in GENG 102, ECE 201 and ECE 221

Program Requirements

72 credits: GENG 101, GENG 102, ECE 201, ECE 202, ECE 220, ECE 301, ECE 314, ECE 320, ECE 323, ECE 380, ECE 461, ECE 462; CSCI 201, CSCI 301, CSCI 310, CSCI 311, CSCI 331; PHYS 234, PHYS 235; MATH 221, MATH 222, MATH 271, MATH 327.

Electives

Statistics Elective (3 credits): Select either STAT 353 or STAT 417. Junior Elective (3 credits): Select from ECE 316, ECE 391, ECE 390, CSCI 330, CSCI 430, MATH 312, MATH 320, MATH 321, MME 420. Math and Physics Electives (3 credits): Select from MATH 312, MATH 320, MATH 321, MATH 353, MATH 452; PHYS 328, PHYS 333, 346. Senior Elective (3 credits): Select from PHYS 435, PHYS 436, PHYS 445; ENGR 425, ENGR 447; MATH 411, MATH 421, MATH 423, MATH 427, MATH 452, MATH 455; MME 450, or any 400 level ECE or CSCI course not included in the student's Computer Engineering Elective sequence. Computer Engineering Electives (12 credits): Select 1 sequence from the following: Hardware Systems: ECE 421, ECE 422, and ECE 423 (ECE 422 cannot double count as the Junior Elective), and 3 credits of 400 level CSCI coursework (CSCI 412 Highly Recommended). Software Systems: CSCI 411, CSCI 412, and CSCI 413, and 1 of the following: ECE 421, ECE 422 (cannot double count as Junior Elective), ECE 423.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ECE 380.

Program Student Learning Outcomes

- An ability to apply knowledge of mathematics, science, and engineering.
- An ability to design and conduct experiments, as well as to analyze and interpret data.
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- An ability to function on multidisciplinary teams and an ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility and an ability to communicate effectively.
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

- A recognition of the need for, and an ability to engage in life-long learning.
- A knowledge of contemporary issues.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

BS - Electrical Engineering *(106 credits)*

Admission Requirements

- GPA: 2.50
- Completion of GENG 101, GENG 102, ECE 201, ECE 220, ENGL 191, MATH 221, MATH 222, PHYS 234, PHYS 235, and CHEM 210 with a grade point average (GPA) of at least 2.5 and with an overall GPA of 2.5
- C or better in ECE 102, ECE 201 and ECE 220.

Program Requirements

79 credits: GENG 101, GENG 102, ECE 201, ECE 202, ECE 220, ECE 301, ECE 314, ECE 316, ECE 320, ECE 323, ECE 380, ECE 391, ECE 461, ECE 462; CSCI 201; CHEM 210; PHYS 234, PHYS 235; MATH 221, MATH 222, MATH 327, MATH 320.

Electives

Non-EE/Research Elective (3 credits): Select from MME 201, MME 211, MME 224, MME 243; PHYS 328, PHYS 329, PHYS 333, PHYS 334; MATH 271; CHEM 211; ECE 290. PHYS/Jr. Research Elective (3 credits): Select from PHYS 328, PHYS 329,PHYS 346, PHYS 435, PHYS 436, PHYS 445, ECE 390. STAT Elective (3 credits): Select from STAT 353 or STAT 417. Depth Sequence (6 credits): Select one sequence of courses from the 400 level ECE courses from the sequences listed below: Power Sequence: ECE 411 and 412. Digital Sequence: ECE 421 and Select either ECE 422 or ECE 423. Communication Sequence: ECE 431 and Select either ECE 432, ECE 433 or ECE 471. Controls Sequence: ECE 451 and Select either ECE 452 or ECE 471. Digital Signal Processing Sequence: ECE 471 and Select either ECE 473 or ECE 474. Breadth Electives (6 credits). Select two from ECE 411, ECE 412, ECE 421, ECE 422, ECE 423, ECE 431, ECE 451, ECE 471, or ECE 482. Senior Elective (3 credits). Select from PHYS 435, PHYS 436, PHYS 445; ENGR 425, ENGR 447;MATH 411 MATH 421, MATH 423, MATH 427, MATH 452, MATH 455; STAT 353, STAT 417, STAT 447; CSCI 330, CSCI 331, CSCI 421, CSCI 450; ECE 381, ECE 411, ECE 421, ECE 422, ECE 423, ECE 431, ECE 432, ECE 433, ECE 440, ECE 444, ECE 451, ECE 452, ECE 471, ECE 473, ECE 474, ECE 482, ECE 490; MME 352, MME 450.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ECE 380.

Program Student Learning Outcomes

- Our graduates will have the ability to apply technical knowledge to analyze and solve practical electrical and computer engineering problems.
- Our graduates will have the ability to practice engineering in a professional manner with effective communication and teamwork skills.
- Our graduates will have the ability to pursue post-graduate or continuing education opportunities to acquire the latest knowledge and skills.
- Our graduates will be able to understand the societal and ethical issues associated with the engineering profession.

MS

Electrical and Computer Engineering

Chairperson: Md (Mahbub) Hossain
Address: 211 Engineering & Computing Center
Phone: 320.308.3252
Website: www.stcloudstate.edu/ece

MS - Electrical Engineering *(30-36 credits)*

Admission Requirements

- GPA: 3.0
- A baccalaureate degree in Electrical Engineering or Computer Engineering with a major GPA of at least 3.0 in the last two years. Provisional admission for students who have undergraduate degrees in technical areas such as mathematics, physics, computer science, and other engineering disciplines may be possible. See program website for information.
- Minimum Quantitative GRE score of 155.
- Students who score below 4.0 on the analytical writing portion of the GRE are required to complete an approved SCSU

English writing course with a grade of C or better.
- The GRE requirement is waived for applicants with a Bachelor of Science in Electrical Engineering or Computer Engineering from St. Cloud State and a major GPA of at least 3.0 in the last two years.
- Some undergraduate courses may be required for applicants who have BS degrees but need additional undergraduate training in specific areas for successful completion of the MSEE.

Notes

- Conditional admission may be possible. See program website for information.

Plan A
Option(s): Thesis
Credits: 30
Core: 18-24 credits of 500- and 600-level ECE classes (exclusive of ECE 699) including a minimum of 12 credits of ECE 600-level courses including 3 credits of ECE 696. Select courses with advisor approval.
Electives: 0-6 credits from 500- and 600-level courses in mathematics, statistics, computer science, physics, material science, or biology. Select courses with advisor approval.
Research: 6 credits: ECE 699.

Plan B
Option(s): Starred Paper(s) | Comprehensive Exam
Credits: 33
Core: 21-30 credits of 500- and 600-level ECE classes (exclusive of ECE 697) including a minimum of 15 credits of ECE 600-level courses including 3 credits of ECE 696. Select courses with advisor approval.
Electives: 0-9 credits from 500- and 600-level courses in mathematics, statistics, computer science, physics, material science, or biology. Select courses with advisor approval.
Research: 3 credits: ECE 697.

Plan C
Option(s): Portfolio/Project | Portfolio/Internship
Credits: 36
Core: 21-30 credits of 500- and 600-level ECE classes including a minimum of 15 credits of ECE 600-level courses and 3 credits of ECE 696. Select courses with advisor approval.
Electives: 0-6 credits from 500- and 600-level courses in mathematics, statistics, computer science, physics, material science, or biology. Select courses with advisor approval.
Research: 6-9 credits of ECE 644 and an approved portfolio of written reports from course work and research.

Program Student Learning Outcomes

- Students will be able to apply their knowledge of mathematics, science, and engineering to engineering problems.
- Students will be able to practice the profession of engineering using the latest tools, techniques, and skills.
- Students will be able to design or formulate practical solutions for engineering problems based on their knowledge of mathematics, science, and engineering.
- Students will be able to analyze and interpret data from experiments of their own design.
- Students will be able to design a component, system, or process while meeting realistic constraints.
- Students will produce professional communications appropriate to the discipline and situation.
- Students will be able to operate on multi-function teams.
- Students will be able to analyze the impact of electrical engineering solutions in global and societal contexts from identified contemporary issues.
- Students will be able to make appropriate professional judgments in accordance with their ethical responsibilities.
- Our alumni will actively participate in continuing professional development and service.

English

BA, BES and Minor

English
Co-Chairpersons: Judy Dorn, Judith Kilborn
Address: 126 - 51 Building
Phone: 320.308.3061

Email: english@stcloudstate.edu
Website: www.stcloudstate.edu/english

BA - English - Creative Writing *(39-43 credits)*

Admission Requirements

- GPA: 2.50

Notes

- BA English Majors (except for those enrolled in the 45-credit Literature concentration) must elect a minor program of study or must complete one year of a foreign language.

Program Requirements

Introduction: ENGL 300 (3 credits) Advanced writing: Select one from ENGL 331, ENGL 332, ENGL 333 (4 credits) Historical and Cultural Perspectives: (9-11 credits) May also be met through an appropriate ENGL 481. At least one: ENGL 202, ENGL 203, ENGL 205, ENGL 215, ENGL 216, ENGL 302, ENGL 303, ENGL 305, ENGL 307, ENGL 315, ENGL 316, ENGL 317, ENGL 414, ENGL 493. American contexts: one from ENGL 310 - ENGL 313. British contexts: one from ENGL 321 - ENGL 328, ENGL 424. Creative Writing: Select 17-19 credits from the following list. At least two courses must be at the 400 level. ENGL 340, ENGL 341 [4 credits], ENGL 342 [4 credits], ENGL 343, ENGL 344 (or FS 360), ENGL 440, ENGL 441, ENGL 442, ENGL 443, ENGL 445, ENGL 447, ENGL 448. The 340-level courses are prerequisites for the 440-level courses in the same genre and cannot be taken concurrently with the 440-level courses. Theory and applications: Select at least one: (3-4 credits Theory surveys: ENGL 402, ENGL 433. Applications: ENGL 403, ENGL 431, ENGL 432, ENGL 497 (Internship) Linguistics: ENGL 361. Senior Capstone: ENGL 490 (3 credits)

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing ENGL 490 for the creative writing concentration.

Program Student Learning Outcomes

- Learn to recognize and develop a working knowledge of representative texts and writers within a genre tradition in order to contribute and respond to that tradition creatively.
- Produce their own work within the genre, with a focus on process from idea generation through drafting and revision to final draft.
- Develop a working knowledge of the vocabulary of craft.
- Develop a working knowledge of the stylistic choices available to writers within a genre tradition and an awareness of possible motivations and implications of those choices.
- Learn to respond responsibly and constructively to creative works produced both by professional writers and student peers.
- Gain experience with the production of creative publications and/or the performance of creative works.

BA - English Studies - General *(40 credits)*

Admission Requirements

- GPA: 2.50

Notes

- BA English Majors (except for those enrolled in the 45-credit Literature concentration) must elect a minor program of study or must complete one year of a foreign language.

Program Requirements

Introduction: English 300 (3 credits) Advanced writing: Select one: ENGL 331, ENGL 332, ENGL 333 (4 credits) Advanced study requirement: at least two courses in addition to ENGL 490 must be taken at the 400 level. Historical and Cultural Perspectives: (11 credits) At least one from: ENGL 202, ENGL 203, ENGL 205, ENGL 215, ENGL 216, ENGL 302, ENGL 303, ENGL 305, ENGL 307, ENGL 315, ENGL 316, ENGL 317, ENGL 414, ENGL 493. American contexts: one from ENGL 310-313. British contexts: one from ENGL 321-322, ENGL 325-328. Theory and applications: Select at least one from any of these categories: (3-4 credits) Theory surveys: ENGL 402, ENGL 433. Applications: ENGL 403, ENGL 431, ENGL 432, ENGL 497 (Internship). Linguistics: ENGL 361,

ENGL 465, ENGL 466. Senior capstone/UDW: 490 (3 credits).

Electives
To complete the 40 required credits, take 15-16 additional credits in any creative writing, linguistics, literature, and writing courses numbered higher than 201. Students may designate a program concentration: In applying for the English major, students may elect a concentration, to be recorded on official transcripts.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ENGL 490 for the general concentration.

Program Student Learning Outcomes

- Learn to read and write about texts, demonstrating sensitivity to language, meaning, tone, imagery, point of view, and socio-historical context.
- Learn to develop an effective written response, argument, or exposition that is appropriate for a particular purpose, audience, situation, and authorial role.
- Develop familiarity with a broad range of the literatures in English--as appropriate to each major program--in terms of its integrating traditions and its diversity.
- Learn to recognize and work with the technique and form of a work in relation to its genre, and to see works within a genre tradition.
- Learn to respond with understanding and critical sophistication to works that embody behaviors, values, and perspectives that are unfamiliar to the student's own point of view.
- Develop an awareness of the disciplinary frameworks, terminology, and theoretical and critical issues in English studies.

BA - English - Linguistics *(40 credits)*

Admission Requirements

- GPA: 2.50

Notes

- BA English Majors (except for those enrolled in the 45-credit Literature concentration) must elect a minor program of study or must complete one year of a foreign language.

Program Requirements
Introductory course: English 361 (4 credits) Linguistics (4 courses, 12 credits) ENGL 464, ENGL 465, ENGL 466, ENGL 469 (may be repeated), ENGL 473. Select one option (9-12 credits) Applied Linguistics option: ENGL 461, ENGL 462, ENGL 463, ENGL 467, ENGL 468. English option: Three or four other courses in English. Cognates (0-9 credits): ANTH 360; ED 457, ED 458; CSD 220, CSD 324; PHIL 251 or PHIL 252, PHIL 303 or PHIL 460. Study Abroad (0-12 credits in consultation with advisor). Departmental electives (0-6 credits): any English courses above 201 to complete 40 credits. Capstone (3-4 credits): ENGL 477, ENGL 478, ENGL 490 (UDW).

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing one of the following courses: ENGL 464, ENGL 465, ENGL 466, ENGL 469, ENGL 473 or ENGL 490.

Program Student Learning Outcomes

- An English as a second language teacher masters a high level of proficiency in English commensurate with the role of an instructional model and develops an awareness of the process of formal language learning by learning a second language through two years of second language instruction in a high school setting or one year of second language instruction in a postsecondary setting, or the equivalent.
- An English as a second language teacher identifies, selects, designs, and prepares a variety of methods, techniques, and program models suitable for second language instruction with diverse learners including adapting existing materials to meet the needs of the students with limited English proficiency.
- An English as a second language teacher identifies, selects, designs, and prepares

various content-based methodologies and integrates language acquisition and use of language functions across learning experiences to facilitate full inclusion of students with limited English proficiency in the school setting.
- An English as a second language teacher plans, prepares and communicates successfully with students, parents, colleagues, and community members.
- An English as a second language teacher identifies, selects, designs, and prepares communicative instruction in the second language context with a focus on the importance of developing communication skills in listening, speaking, reading, and writing across the curriculum.
- An English as a second language teacher identifies, selects, designs, prepares and uses formal and informal second language assessment techniques to determine appropriate placement and to evaluate the progress of students with limited English proficiency in order to implement criteria for determining the readiness of students to enter and exit limited English proficiency programs.
- An English as a second language teacher identifies, describes, analyzes, and explains or classifies the contributions of general and applied linguistics to second language education.
- An English as a second language teacher identifies and utilizes the fundamentals of the first and second language acquisition processes and their similarities and differences.
- An English as a second language teacher identifies and utilizes the historical, social, and political aspects of language and cultural patterns in the United States influence second language instruction.
- An English as a second language teacher observe, analyze, evaluate and reflect on teaching of English as a second language that integrates understanding of English as a second language with the teacher's understanding of pedagogy, students, learning, classroom management, and professional development.

BA - English - Literature *(45 credits)*

Admission Requirements

- GPA: 2.50

Program Requirements

Introduction: English 300 (3 credits) Advanced writing, Select one: ENGL 331, ENGL 332, ENGL 333 (4 credits). Advanced study requirement: In addition to ENGL 490, at least three courses (9 credits) must be at the 400 level. Historical and cultural perspectives in literature (no double counting between categories allowed; appropriate ENGL 481 topics courses may also meet these requirements): At least two from: ENGL 202, ENGL 203, ENGL 205, ENGL 215, ENGL 216, ENGL 302, ENGL 303, ENGL 305, ENGL 307, ENGL 315, ENGL 316, ENGL 317, ENGL 414, ENGL 493 (6 credits) British and classic European literature: (12-15 credits) British and classic European literature: (12-15 credits) Early (two courses): ENGL 202, ENGL 205, ENGL 321, ENGL 322, ENGL 325, ENGL 424 (6-8 credits) Late (one course): ENGL 326, ENGL 327, ENGL 328 (4 credits) Shakespeare: ENGL 323 or ENGL 423 (3 credits) American literature (8 credits) Early (one course): ENGL 310 or ENGL 311. Late (one course): 312 or 313. Theory and applications: Select at least one from any of these groups: (3-4 credits) Theory surveys: ENGL 402, ENGL 433. Applications: ENGL 403, ENGL 431, ENGL 497 (Internship). Linguistics: ENGL 361, ENGL 465, ENGL 466. Senior Capstone/UDW: ENGL 490 (3 credits).

Electives

3-8 credits in English to complete 45 credit minimum.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ENGL 490.

Program Student Learning Outcomes

- Interpret texts and read closely, showing sensitivity to vocabulary and language, tone (especially irony and nuance), imagery, and ambiguity.
- Differentiate among the points of view of characters, narrators, authors, readers (including the self), and critics.
- Think critically, using reasoning and inference from evidence while analyzing

or arguing and working through problems in a systematic or comprehensive way, being mindful of complexity and of ethics.
- Research in our world of overwhelmingly abundant materials--designing, implementing, and evaluating the results of inquiry.
- Write argument and exposition that is shaped appropriately for a particular purpose, audience, and situation, with self-awareness about how written effects work on us.
- Recognize the pastness of the past, which may be about perspectives different from our own period. Interpret texts in relation to social, cultural, or historical contexts, analyzing the motivations, needs, values, and historical dynamics that give rise to literary works, as well as literary works transformative agency in these contexts.
- Recognize language as constantly changing and as fundamental to cultural expression. Relate to works that embody behaviors, values, and perspectives unfamiliar to you (showing empathy, understanding).
- Use awareness of genre:A) As a reader, you recognize how the form, type, or kind of text (poem, letter, professional work, essay, drama, fiction) affects its meaning. B) As a writer, you can create a text in a form appropriate for its purpose.
- Know methods, terms, and theories in the field, and apply that knowledge in writing and speaking. Let themselves be creative in extrapolating from ideas or in problem-solving and develop an imagination for divergent or alternative ideas.
- Think independently of instructors or published texts, generating research questions and insights of their own. Recognize professional conversational dynamics: how to contribute to and sustain discussion (building ideas through questions and step by step inquiry), present ideas, and navigate and respect difference.

BA - English - Rhetoric and Writing *(41 credits)*

Admission Requirements

- GPA: 2.50

Notes

- Students in this major and concentration must declare a minor.

Program Requirements

Core (14 credits): ENGL 300 (3 credits), ENGL 308 (4 credits), ENGL 433 or ENGL 497 (4 credits), ENGL 490 (3 credits/UDW). Advanced writing (8 credits, Select two): ENGL 331, ENGL 332, ENGL 333, ENGL 341 (8 credits) Rhetoric and Writing Electives (16 credits): Select at least four additional courses from the following that are not already counted toward the concentration core or the advanced writing requirement: ENGL 306, ENGL 331, ENGL 332, ENGL 333, ENGL 335, ENGL 341, ENGL 353, ENGL 403, ENGL 405, ENGL 430, ENGL 431, ENGL 433, ENGL 434, ENGL 497 Electives (one course, 1-4 credits): Select one additional English course above 201 to complete 41 credits. Students electing the Rhetoric and Writing concentration are strongly encouraged to pursue a minor rather than a foreign language unless the foreign language directly ties to the student's program of study.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing ENGL 490.

Program Student Learning Outcomes

- Students analyze discourse from a variety of theoretical perspectives, as they pertain to the appropriate fields of rhetoric/composition, linguistics, literary study, and/or creative writing.
- Students articulate connections between theories and practices
- Students demonstrate their understanding of theory and practice connections through teaching/tutoring/service learning in departmental or external programs.
- Students develop an understanding of rhetorical situations including ability to

respond to those situations through writing.
- Students develop awareness of international and/or diverse cultures through course content, readings, teaching and professional development opportunities.
- Students develop intercultural communicative competency through activities such as international or diverse cultural experiences within and outside course work, including teaching and professional development opportunities.
- Students develop an awareness of professional options available to them and the types of preparation necessary for succeeding in their chosen career.
- Students integrate critical, theoretical knowledge and reflective practice in a variety of forms and in a variety of contexts.
- Students analyze and evaluate historical and contemporary research as it pertains to a particular discipline.
- Depending on emphasis area, students conduct a culminating scholarly or creative achievement of research project and report the results for an academic audience.

BES - English Studies *(36 credits)*

Admission Requirements

- GPA: 2.50

Program Requirements

36 credits in ENGL above ENGL 201 with consent of BES advisor.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing ENGL 331, ENGL 332, ENGL 333, ENGL 341, or ENGL 490.

Program Student Learning Outcomes

- Ability to interpret texts in relation to socio-historical contexts.?
- Ability to write argument and exposition that is shaped appropriately for a particular purpose, audience, and situation.?
- Critical thinking and analysis.? (see AAC&U VALUE rubric).
- Ability to relate to works that embody behaviors, values, and perspectives unfamiliar to you.
- Familiarity with a broad range of the literature in your field, both in terms of it diversity and its integrating traditions (the continuities that bring it together).
- Awareness of genre: A) As a reader, you recognize how the form, type, or kind of text (poem, business letter, essay, drama, grant application) affects its meaning. ?B) As a writer, you can create a text in a form appropriate for its purpose.
- Knowledge of methods, terms, and theories in your field.
- Ability to interpret texts through sensitivity to vocabulary and language, tone, imagery, and point of view.

Minor - English Studies *(18-22 credits)*

Program Requirements

Introduction (one course, 3 credits): ENGL 300. British Literature (one course, 3-4 credits): Select one course from among the following: the ENGL 320 group (321-328), the ENGL 420 group, or ENGL 481 if British. American Literature (one course, 4 credits): Select one from ENGL 310, ENGL 311, ENGL 312, ENGL 313 or ENGL 481 if American topic. Multicultural, Global, and Gender Perspectives (one course, 3-4 credits; double counting of a liberal education course is possible): Select one course from ENGL 202, ENGL 203, ENGL 205, ENGL 215, ENGL 216, ENGL 302, ENGL 303, ENGL 307, ENGL 315, ENGL 316, ENGL 317, ENGL 414, ENGL 493 or ENGL 481 if appropriate. Writing (one course, 4 credits): Select one course from ENGL 331, ENGL 332, or ENGL 333.

Electives

One course course at the 300-400 level, 2-4 Credits.

Minor - English - Creative Writing (BA) *(19-21 credits)*

Program Requirements

English majors who elect the creative writing minor may double count 6 credits in English above 201. Creative Writing 340 Group (three courses, 10-11

Credits): Select three courses from among ENGL 340, ENGL 341, ENGL 342, ENGL 343, ENGL 344 (or FS 360). Advanced Creative Writing Group (two courses, 6 credits): Select two courses from among ENGL 440, ENGL 441, ENGL 442, or ENGL 443. Literature (one course, 3-4 credits): Select any literature course above 201.

Minor - Linguistics *(16 credits)*

Program Requirements

Introduction (4 Cr.): ENGL 361. Core (9 Cr.): ENGL 464, ENGL 465, ENGL 473.

Electives

3 credits: ENGL 466 or ENGL 469.

Minor - Rhetoric and Writing *(18 credits)*

Program Requirements

Advanced Applications in Theory and Practice (one course, 4 credits): ENGL 308. Advanced Writing Courses (two courses, 8 credits): ENGL 331, ENGL 332, ENGL 333 or ENGL 341.

Electives

Specialized Studies Electives (two courses, 6-8 credits): Select at least two additional courses from the following: ENGL 306, ENGL 335, ENGL 353, ENGL 403, ENGL 405, ENGL 430, ENGL 431, ENGL 433, ENGL 434, or ENGL 497. Students majoring or minoring in COMM or CMST may double-count COMM 352, CMST 411, or CMST 441 for one course.

Communication Arts and Literature (Education BS)

English

Co-Chairpersons: Judy Dorn, Judith Kilborn
Address: 126 - 51 Building
Phone: 320.308.3061
Email: english@stcloudstate.edu
Website: www.stcloudstate.edu/english

BS - Communication Arts and Literature *(47-51 credits)*

Admission Requirements

- GPA: 2.75
- Completion of 36 semester hours, with at least 12 semester hours in residence at SCSU, and submission of scores to satisfy the current basic skills requirements.
- C or better in ENGL 191 and CMST 192

Notes

- Double counting of one liberal education course toward an English program is permitted, but credit for 100 level courses and for 201 does not count toward the English major or minor.

Program Requirements

(47-51 credits): Communication and Language (16 credits): CMST 211, CMST 229, CMST 310, CMST 339, ENGL 361. Advanced Writing (3-4 credits): ENGL 331 or ENGL 332 or ENGL 333 or ENGL 334 or ENGL 353 or ENGL 464. Literature (19-22 credits): ENGL 300, ENGL 323; Diversity: ENGL 203 or ENGL 215 or ENGL 216 or ENGL 302 or ENGL 303 or ENGL 305 or ENGL 414 or ENGL 493. British Literature: ENGL 321 or ENGL 322 or ENGL 325 or ENGL 326 or ENGL 327 or ENGL 328. American Literature: ENGL 310 or ENGL 311 or ENGL 312 or ENGL 313. Choose ENGL 454 or ENGL 402 or one more American or British Literature course. Pedagogy (9 credits): ENGL 351, CMST 452, ENGL 451.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing ENGL 451.

Program Student Learning Outcomes

- Applies philosophy and theories of communication arts and literature instruction.
- Applies the integration of reading, writing, speaking, listening, and viewing.
- Applies strategies for selecting and using diverse texts/materials that correlate individual student abilities with developmentally appropriate learning experiences.
- Applies research methods encompassing disciplinary content.
- Demonstrates knowledge, skills, and ability to teach reading.
- Demonstrates knowledge, skills, and ability to teach writing.
- Demonstrates knowledge, skills, and ability to teach listening.
- Demonstrates knowledge, skills, and ability to teach speaking.

- Demonstrates knowledge, skills, and ability to teach literature.
- Develops curricular goals and purposes based on the central concept of communication arts and literature and knows how to apply instructional strategies and materials for achieving student understanding of this discipline.

Teaching English as a Second Language Minor

English

Co-Chairpersons: Judy Dorn, Judith Kilborn
Address: 126 - 51 Building
Phone: 320.308.3061
Email: english@stcloudstate.edu
Website: www.stcloudstate.edu/english

Minor - Teaching English as a Second Language *(24 credits)*

- Admission RequirementsA GPA of 2.5 is required for enrollment in an English major.
- Prerequisites include: ENGL 361, Introduction to Linguistics.

Notes

- This minor can be taken by itself, or it can be taken for ESL licensure if taken with an appropriate education block, including practice teaching.
- Students may both major and minor in English if the major and minor are in different areas of concentration and if they double-count a maximum of 6 credits between both programs.
- ESL Licensure is a K-12 teaching licensure, including completion of the secondary education block, a foreign language requirement: one year of college (8 credits) or two years of high school or some combination of both or the equivalent.

Program Requirements
Core: ENGL 461, ENGL 462, ENGL 464, ENGL 466, ENGL 468. Select one: ENGL 463, ED 457.

Electives
Select two: ENGL 465, ENGL 467, ENGL 469, ENGL 473; ED 457, ED 458. One of the following: SPAN 450, FREN 450, GER 450.

Program Student Learning Outcomes

- An English as a second language teacher masters a high level of proficiency in English commensurate with the role of an instructional model and develops an awareness of the process of formal language learning by learning a second language through two years of second language instruction in a high school setting or one year of second language instruction in a postsecondary setting, or the equivalent.
- An English as a second language teacher identifies, selects, designs, and prepares a variety of methods, techniques, and program models suitable for second language instruction with diverse learners including adapting existing materials to meet the needs of the students with limited English proficiency.
- An English as a second language teacher identifies, selects, designs, and prepares various content-based methodologies and integrates language acquisition and use of language functions across learning experiences to facilitate full inclusion of students with limited English proficiency in the school setting.
- An English as a second language teacher plans, prepares and communicates successfully with students, parents, colleagues, and community members.
- An English as a second language teacher identifies, selects, designs, and prepares communicative instruction in the second language context with a focus on the importance of developing communication skills in listening, speaking, reading, and writing across the curriculum.
- An English as a second language teacher identifies, selects, designs, prepares and uses formal and informal second language assessment techniques to determine appropriate placement and to evaluate the progress of students with

limited English proficiency in order to implement criteria for determining the readiness of students to enter and exit limited English proficiency programs.
- An English as a second language teacher identifies, describes, analyzes, and explains or classifies the contributions of general and applied linguistics to second language education.
- An English as a second language teacher identifies and utilizes the fundamentals of the first and second language acquisition processes and their similarities and differences.
- An English as a second language teacher identifies and utilizes the historical, social, and political aspects of language and cultural patterns in the United States influence second language instruction.
- An English as a second language teacher observe, analyze, evaluate and reflect on teaching of English as a second language that integrates understanding of English as a second language with the teacher's understanding of pedagogy, students, learning, classroom management, and professional development.

Certificate - TESOL Certificate *(9-10 credits)*

Admission Requirements

- GPA: 2.75
- Admission to any undergraduate program at SCSU.
- Interview with TESL Director

Program Requirements
ENGL 461, ENGL 478

Electives
ENGL 361 or ENGL 463

English MA, MS and Graduate Tracks Leading to Licensure

English

Co-Chairpersons: Judy Dorn, Judith Kilborn
Address: 126 - 51 Building
Phone: 320.308.3061
Email: english@stcloudstate.edu
Website: www.stcloudstate.edu/english

MA - English Studies *(36 credits)*

Admission Requirements

- GPA: 2.75
- Meet the GPA admission standards as required by the School of Graduate Studies
- Submission of a 5-10 page sample of academic writing to Director of English Graduate Studies
- All other application materials are submitted to the School of Graduate Studies

Notes

- To graduate, at least one-half of the required credits must be earned in 600-level courses
- GRE is not required.
- The Master of Arts degree in English is appropriate for a program leading to the Ph.D., for community or technical college teaching, and for general cultural enrichment.
- Graduate students interested in future doctoral study should develop competence in an appropriate foreign language.
- Cognate (optional): See the department website for cognate information.

Plan A
Option(s): Thesis | Creative Work
Credits: 36
Core: ENGL 602, ENGL 606, one 600-level course in British literature, one 600-level course in American literature, ENGL 699 or ENGL 698
Electives: Choose 12-18 credits as needed from English courses to complete the 36 credit degree requirement. Only three credits in any combination from ENGL 653, ENGL 655, ENGL 656 may count toward the degree. To complete a cognate, students may take a maximum of 6 graduate credits in linguistics, supervised teaching/tutoring courses, or in graduate courses in another department with approval of their advisor.
Research: Must pass a final oral examination on the thesis submitted to the student's final evaluation committee

Plan B
Option(s): Starred Paper(s)
Credits: 36
Core: ENGL 602, ENGL 606, one 600-level course in British literature, one 600-level course in American literature, ENGL 690.
Electives: Choose 15-21 credits as needed from English courses to complete the 36 credit degree requirement. Only three credits in any combination from ENGL 653, ENGL 655, ENGL 656 may count toward the degree. To complete a cognate, students may take a maximum of 6 graduate credits in linguistics, supervised teaching/tutoring courses, or in graduate courses in another department with approval of their advisor.
Research: Must pass a final oral examination on the starred papers submitted to the student's final evaluation committee.

Program Student Learning Outcomes

- Students analyze discourse from a variety of theoretical perspectives, as they pertain to the appropriate fields of rhetoric/composition, linguistics, literary study, and/or creative writing.
- Students articulate connections between theories and practices.
- Students demonstrate their understanding of theory and practice connections through teaching/tutoring/service learning in departmental or external programs.
- Students develop an understanding of rhetorical situations including ability to respond to those situations through writing.
- Students develop awareness of international and/or diverse cultures through course content, readings, teaching and professional development opportunities.
- Students develop intercultural communicative competency through activities such as international or diverse cultural experiences within and outside course work, including teaching and professional development opportunities.
- Students develop an awareness of professional options available to them and the types of preparation necessary for succeeding in their chosen career.
- Students integrate critical, theoretical knowledge and reflective practice in a variety of forms and in a variety of contexts.
- Students analyze and evaluate historical and contemporary research as it pertains to a particular discipline.
- Depending on emphasis area, students conduct a culminating scholarly or creative achievement of research project and report the results for an academic audience.

MA - Rhetoric and Writing *(36 credits)*

Admission Requirements

- GPA: 2.75
- Meet the GPA admission standards as required by the School of Graduate Studies
- Submission of a 5-10 page sample of academic writing to Director of English Graduate Studies
- All other application materials are submitted to the School of Graduate Studies

Notes

- To graduate, at least one-half of the required credits must be earned in 600-level courses.
- GRE is not required.
- The Master of Arts degree in English is appropriate for a program leading to the Ph.D., for community or technical college teaching, and for general cultural enrichment.
- Graduate students interested in future doctoral study should develop competence in an appropriate foreign language.
- Cognate (optional): See the department website for cognate information.

Plan A
Option(s): Thesis
Credits: 36
Core: ENGL 605, ENGL 603, ENGL 631, ENGL 699
Electives: Choose 15-21 credits as needed from either of the following areas to complete the 36

credit degree requirement. Professional Communication courses: ENGL 505, ENGL 530, ENGL 531, ENGL 633, ENGL 697. Critical Literacy courses: ENGL 503, ENGL 531, ENGL 632, ENGL 636, ENGL 652, ENGL 654, ENGL 656. To complete an optional cognate, students may take a maximum of 6 credits in English graduate courses in literature, linguistics, and supervised teaching graduate courses, or in graduate courses in another department with approval of their advisor.
Research: Must pass a final oral examination on the thesis submitted to the student's final evaluation committee.

Plan B
Option(s): Starred Paper(s)
Credits: 36
Core: ENGL 605, ENGL 603, ENGL 631, ENGL 690
Electives: Choose 18-24 credits as needed from either of the following areas. Professional Communication courses: ENGL 505, ENGL 530, ENGL 531, ENGL 633, ENGL 697. Critical Literacy courses: ENGL 503, ENGL 531, ENGL 632, ENGL 636, ENGL 652, ENGL 654, ENGL 656. To complete an optional cognate, students may take a maximum of 6 credits in English graduate courses in literature, linguistics, and supervised teaching graduate courses, or in graduate courses in another department with approval of their advisor.
Research: Must pass a final oral examination on the starred papers submitted to the student's final evaluation committee

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: ENGL 605, ENGL 603, ENGL 631, ENGL 695
Electives: Choose 18-24 credits as needed from either of the following areas. Professional Communication courses: ENGL 505, ENGL 530, ENGL 531, ENGL 633, ENGL 697. Critical Literacy courses: ENGL 503, ENGL 531, ENGL 632, ENGL 636, ENGL 652, ENGL 654, ENGL 656. To complete an optional cognate, students may take a maximum of 6 credits in English graduate courses in literature, linguistics, and supervised teaching graduate courses, or in graduate courses in another department with approval of their advisor.
Research: Must pass a final oral examination on the Portfolio submitted to the student's final evaluation committee

Program Student Learning Outcomes

- Develop awareness of disciplinary frameworks, terminology, and critical issues in Rhetoric and Writing.
- Learn to read and respond to texts written by professional writers and peers in a rhetorical manner.
- Learn to design a research project appropriate to the field of Rhetoric and Writing.
- Learn to recognize, evaluate, and apply methods and methodologies commonly used in Rhetoric and Writing.
- Learn to make connections between rhetorical theories, concepts, and principles and workplace and/or pedagogical contexts.
- Produce their own work within a genre with a focus on process from invention through drafting and revision to a final draft.
- Learn to apply theories, concepts, and principles of rhetoric and writing to print, visual, and digital texts.

MA - Teaching English as a Second Language *(36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.

Notes

- For unconditional admission to the TESL program, one year of a second language or equivalent proficiency and completion of an introductory course in linguistics is required.
- A minimum of half of the credits should be earned in 600-level courses limited to graduate students.

Plan A
Option(s): Thesis
Credits: 36
Core: Pedagogy Courses: Required, two courses, 6 credits: ENGL 662, AND either ENGL 661 OR ENGL 671. Distributed: Select three courses, 9 credits: ENGL 563, ENGL 567, ENGL 652, ENGL 654, ENGL

656, ENGL 667, ENGL 668, ENGL 669, ENGL 670, ENGL 671,ENGL 673, ED 557,ED 558. Linguistics: two courses, 6 credits: ENGL 569, ENGL 573, ENGL 663, ENGL 664, ENGL 666.
Electives: A maximum of 6 credits selected from graduate English courses or from cognate courses in other departments.
Research: 9 credits: ENGL 607, ENGL 699.

Plan B
Option(s): Starred Paper(s)
Credits: 36
Core: Pedagogy Courses: Required, two courses, 6 credits: ENGL 662 AND either ENGL 661 OR ENGL 671. Distributed: Select three courses, 9 credits: ENGL 563, ENGL 567, ENGL 652, ENGL 654, ENGL 656, ENGL 667, ENGL 668, ENGL 669 (online), ENGL 670, ENGL 671, ENGL 673, ED 557, ED 558. Linguistics: 9 credits, select three courses: ENGL 569, ENGL 573, ENGL 663, ENGL 664, ENGL 666.
Electives: 6 credit maximum may be earned as electives from any of the courses listed above or from any other graduate course in the English department, or from cognate courses in other departments.
Research: 6 credits: ENGL 668, ENGL 607.

Program Student Learning Outcomes

- An English as a second language teacher masters a high level of proficiency in English commensurate with the role of an instructional model and develops an awareness of the process of formal language learning by learning a second language through two years of second language instruction in a high school setting or one year of second language instruction in a postsecondary setting, or the equivalent.
- An English as a second language teacher identifies, selects, designs, and prepares a variety of methods, techniques, and program models suitable for second language instruction with diverse learners including adapting existing materials to meet the needs of the students with limited English proficiency.
- An English as a second language teacher identifies, selects, designs, and prepares various content-based methodologies and integrates language acquisition and use of language functions across learning experiences to facilitate full inclusion of students with limited English proficiency in the school setting.
- An English as a second language teacher plans, prepares and communicates successfully with students, parents, colleagues, and community members.
- An English as a second language teacher identifies, selects, designs, and prepares communicative instruction in the second language context with a focus on the importance of developing communication skills in listening, speaking, reading, and writing across the curriculum.
- An English as a second language teacher identifies, selects, designs, prepares and uses formal and informal second language assessment techniques to determine appropriate placement and to evaluate the progress of students with limited English proficiency in order to implement criteria for determining the readiness of students to enter and exit limited English proficiency programs.
- An English as a second language teacher identifies, describes, analyzes, and explains or classifies the contributions of general and applied linguistics to second language education.
- An English as a second language teacher identifies and utilizes the fundamentals of the first and second language acquisition processes and their similarities and differences.
- An English as a second language teacher identifies and utilizes the historical, social, and political aspects of language and cultural patterns in the United States influence second language instruction.
- An English as a second language teacher observe, analyze, evaluate and reflect on teaching of English as a second language that integrates understanding of English as a second language with the teacher's understanding of pedagogy, students, learning, classroom management, and professional development.

Licensure - English: Teaching English as a Second Language (Licensure only) *(24 credits)*

- Admission RequirementsCompleted one year of a second language learning or equivalent proficiency. Completed an introductory course in linguistics - ENGL 361.
- Admission Criteria: See here. Professional Education Sequence for Pre K-12 and 5-12 Licensure: ED 300; CEEP 262, CEEP 361; IM 422; HURL 497; ENGL 460 or ED 460; SPED 203; ED 421 and ED 431(co-requisites); ED 466 or ED 467. Admission to Teacher Education and a passing score on the MTLE Basic skills tests is required for placement in student teaching.

Notes

- This program is for teacher licensure only.

Program Requirements
Licensure Courses: (24 credits) ENGL 661 or ENGL 671, and ENGL 662, ENGL 664, ENGL 666, ED 558. Select one of the following: ENGL 563, ENGL 673, ED 557.

Electives
Select two of the following: ENGL 573, ENGL 663, ENGL 667, ENGL 670, ENGL 669

Program Student Learning Outcomes

- An English as a second language teacher masters a high level of proficiency in English commensurate with the role of an instructional model and develops an awareness of the process of formal language learning by learning a second language through two years of second language instruction in a high school setting or one year of second language instruction in a postsecondary setting, or the equivalent.
- An English as a second language teacher identifies, selects, designs, and prepares a variety of methods, techniques, and program models suitable for second language instruction with diverse learners including adapting existing materials to meet the needs of the students with limited English proficiency.
- An English as a second language teacher identifies, selects, designs, and prepares various content-based methodologies and integrates language acquisition and use of language functions across learning experiences to facilitate full inclusion of students with limited English proficiency in the school setting.
- An English as a second language teacher plans, prepares and communicates successfully with students, parents, colleagues, and community members.
- An English as a second language teacher identifies, selects, designs, and prepares communicative instruction in the second language context with a focus on the importance of developing communication skills in listening, speaking, reading, and writing across the curriculum.
- An English as a second language teacher identifies, selects, designs, prepares and uses formal and informal second language assessment techniques to determine appropriate placement and to evaluate the progress of students with limited English proficiency in order to implement criteria for determining the readiness of students to enter and exit limited English proficiency programs.
- An English as a second language teacher identifies, describes, analyzes, and explains or classifies the contributions of general and applied linguistics to second language education.
- An English as a second language teacher identifies and utilizes the fundamentals of the first and second language acquisition processes and their similarities and differences.
- An English as a second language teacher identifies and utilizes the historical, social, and political aspects of language and cultural patterns in the United States influence second language instruction.
- An English as a second language teacher observe, analyze, evaluate and reflect on teaching of English as a second language that integrates understanding of English as a second language with the teacher's understanding of pedagogy, students, learning, classroom management, and professional development.

Certificate - TESOL Certificate Grad *(9 credits)*

Admission Requirements

- GPA: 3.0
- Completion of an undergraduate degree program at an accredited college or university.
- Interview with the TESL director.

Program Requirements
Core (6 credits): ENGL 662, ENGL 665.

Electives
(3 credits): Choose one class: ENGL 661, ENGL 663, ENGL 664, or ENGL 673.

MS - English Education *(36-39 credits)*

Admission Requirements

- GPA: 2.75
- Completed an undergraduate teacher education program from an accredited teacher preparation institution.
- Meet the GPA admission standards as required by the School of Graduate Studies.
- Submission of a 5-10 page sample of academic writing to Director of English Graduate Studies.
- All other application materials are submitted to the School of Graduate Studies.
- GRE is not required.

Notes

- At least one-half of the credits in the M.S. degree program must be earned in courses limited to graduate students.

Plan A
Option(s): Thesis
Credits: 36
Core: 15 credit minimum: One 600-level course in British literature, one 600-level course in American literature, other credits to be selected with English department advisor. Only three credits in any combination from ENGL 653, ENGL 655, ENGL 656 may count toward the degree. Professional Education Courses, 9 credit minimum: Students will select School of Education courses in consultation with the English advisor. Professional Education Courses: 9 credits minimum.
Electives: 3 credits: Credits from related fields to be selected with the English department advisor.
Research: 9 credits: ENGL 606 (or equivalent course), ENGL 699. Must pass a final oral examination on the thesis submitted to the student's final evaluation committee.

Plan B
Option(s): Starred Paper(s)
Credits: 36
Core: 18 credit minimum: One 600-level course in British literature, one 600-level course in American literature, other credits to be selected with English department advisor. Only three credits in any combination from ENGL 653, ENGL 655, ENGL 656 may count toward the degree. Professional Education Courses, 9 credit minimum: Students will select School of Education courses in consultation with the English advisor.
Electives: 6 credits: Credits from related fields to be selected with the English department advisor.
Research: 3 credits: ENGL 606 (or equivalent course). Must pass a final oral examination on the starred papers submitted to the student's final evaluation committee.

Plan C
Option(s): Portfolio/Project
Credits: 39
Core: 18 credit minimum: One 600-level course in British literature, one 600-level course in American literature, other credits to be selected with English department advisor. Only three credits in any combination from ENGL 653, ENGL 655, ENGL 656 may count toward the degree. Educational Foundations: 6 credits. Students will select from the list developed by the School of Education. Educational Applications and Implementations: 12 credits: Selected work with the English advisor's approval.
Electives:
Research: 3 credits: ENGL 606 (or equivalent course).

Program Student Learning Outcomes

- Students analyze discourse from a variety of theoretical perspectives.
- Students create, analyze, and respond to various rhetorical situations.

- Students integrate critical, theoretical, and pedagogical knowledge to improve their own learning, as well as their students.
- Students conduct a culminating scholarly project, be it a thesis or collection of starred papers, appropriate for an academic audience.

Certificate - Writing Center Administration *(10 credits)*

Admission Requirements

- GPA: 3.00
- Completed BA or BS in English or related discipline.

Program Requirements

ENGL 647, ENGL 648, ENGL 649, ENGL 654

Environmental & Technological Studies

Environmental and Technological Studies

Environmental and Technology Studies

Chairperson: Kevin Haglin
Address: 216 Headley Hall
Phone: 320.308.3235
Email: ets@stcloudstate.edu
Website: www.stcloudstate.edu/ets

BS - Environmental Science *(86 credits)*

Admission Requirements

- GPA: 2.50
- MATH 112 is a prerequisite for several required courses.
- Completion of 3 of the following courses: ETS 260, ETS 367, ETS 373, ETS 375, ETS 461, BIOL 151, BIOL 152, BIOL 306 or BIOL 308, BIOL 312, CHEM 210, CHEM 211, CHEM 240, CHEM 350, AHS 220, AHS 230, AHS 260, PHYS 231, MGMT 301, STAT 239.

Notes

- Liberal Education requirements: Goal Area 3 Natural Sciences; Goal Area 4 Mathematical/Logical Reasoning; Goal Area 10 People and the Environment and half of Goal Area 5 History and Social and Behavioral Sciences are satisfied by this program.

Program Requirements

Interdisciplinary Science Core: BIOL 151, BIOL 152, BIOL 306 or BIOL 308, BIOL 312, CHEM 210, CHEM 211, CHEM 240, AHS 230, AHS 260, PHYS 231 or AHS 220 (approval of advisor required). Environmental Core: ETS 260, ETS 310, ETS 367, ETS 368, ETS 375, ETS 444, ETS 461, ETS 469, CHEM 350, ECON 351, ENGL 332, STAT 239.

Electives

Technical Electives: Select at least 3 credits from each of the following groups (approval of major advisor required). GROUP A - Environmental Studies: ETS 262, ETS 360, ETS 363, ETS 373, ETS 444, ETS 463, ETS 465, ETS 467, ETS 468, ETS 482. GROUP B - Natural Sciences: BIOL 326, BIOL 436, CHEM 320, CHEM 440, AHS 305, AHS 322, AHS 325, AHS 332, AHS 334, AHS 336, AHS 338, AHS 380, AHS 423, AHS 432, AHS 434. GROUP C - Social Sciences: ANTH 352, ECON 451, GEOG 303, GEOG 316, GEOG 325, GEOG 372, GEOG 379, GEOG 394, GEOG 472, GEOG 473, GEOG 492, HIST 349, HLTH 482, MGMT 301.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 461.

Program Student Learning Outcomes

- Compare and contrast technological systems used in society and how they relate to environmental problems.
- Apply scientific and quantitative literacy principles and concept to real-world environmental problem solving experiences.
- Critically examine the fate of major environmental contaminants based on their chemical properties and location within the ecosphere.
- Apply appropriate scientific literature and research principles to solving environmental problems in both the private and public sector of society.
- Demonstrate writing and presentation skills necessary to communicate

scientific information to professional audiences.

BS - Environmental Studies *(66 credits)*

Admission Requirements

- GPA: 2.50
- Completion of 3 of the following courses: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, or ETS 456.

Notes

- In the Liberal Education program, Goal Areas 3, 4 and 10 as well as half of Area 5 are fulfilled by completion of the Environmental Studies curriculum.

Program Requirements

MATH 112 is a prerequisite for several of the courses. Department Core (22 credits): ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, ETS 456. Major Requirements (32-33 credits): ETS 262, ETS 310, ETS 367, ETS 368, ETS 375, ETS 469; CHEM 210; AHS 230; ECON 351; STAT 239.

Electives

Technical Electives 12 credits: At least six credits in Group A and at least three credits in Groups B and C chosen with the approval of the student's advisor. GROUP A-Technology Studies: ETS 360, ETS 444, ETS 463, ETS 465, ETS 467, ETS 468, ETS 482. GROUP B-Natural Sciences: BIOL 312, BIOL 326; CHEM 211, CHEM 240, CHEM 320; AHS 220, AHS 260, AHS 332, AHS 334; PHYS 208. GROUP C-Social Sciences: ANTH 352; CMTY 350, CMTY 451, CMTY 466; ECON 451; ENGL 332, ENGL 341; GEOG 303, GEOG 316, GEOG 325, GEOG 372, GEOG 379, GEOG 393, GEOG 394, GEOG 416, GEOG 472, GEOG 473, GEOG 492, GEOG 496; HIST 349, HIST 480; HLTH 482; MGMT 301; PSY 323: REC 412.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Apply the scientific and quantitative literacy principles and concepts to real-world environmental problem solving experiences.
- Apply state-of-the-art environmental measuring instrumentation to the solution of common environmental problems.
- Conduct sound research principles to the solution of environmental problem in society.
- Research scientific literature and develop writing skills to enhance environmental research projects and problems in both the private and public sector of society.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of environmental work within the private and public sector of society.
- Demonstrate effective and successful disposition in teamwork and leadership skills to improve the effectiveness of environmental work within the private and public sector of society.

BS - Technology Education *(48 credits)*

Admission Requirements

- GPA: 2.50
- ETS 182 is a requirement of this major. Students should enroll in ETS 182 as a part of their liberal education experience.
- Completion of 3 of the following courses: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, or ETS 456.
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Program Requirements

Department Core: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, ETS 456. Major Requirements: ETS 115, ETS 153, ETS 253, ETS 336, ETS 345, ETS 353.

Electives

Technical Electives: Select 9 credits from any of the following groups with no more than 3 credits from

100 level courses and no more than 3 credits from internships: Group A--Communications: ETS 312, ETS 314, ETS 325, ETS 411, ETS 413, ETS 423. Group B--Environment: ETS 262, ETS 360, ETS 375, ETS 463, ETS 465, ETS 467, ETS 469. Group C--Production: ETS 130, ETS 134, ETS 270, ETS 330, ETS 335, ETS 343, ETS 348, ETS 430, ETS 436, ETS 446, ETS 448. Grou D--Transportation: ETS 185, ETS 186, ETS 482. Group E--Professional/Topical: ETS 405, ETS 414, ETS 444, ETS 451, ETS 458.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Analyze the components of the Designed World as identified by the Standards for Technological Literacy.
- Identify the nature of technology within the context of the Designed World.
- Compare and contrast the relationships and impacts between technology and society in the context of the Designed World.
- Apply common design principles to the development of technology within the context of the Designed World.
- Identify common technology problems and design appropriate solutions to these problems within the context of the Design World.
- Design, implement and evaluate curricula based upon the Standards for Technological Literacy.
- Use a variety of effective teaching practices that enhance and extend learning of technology.
- Design, create, and manage learning environments that promote technological literacy. Apply the principles of student learning to a diverse learning style of students.
- Apply an engaging and comprehensive professional growth program to improve the teaching of technology.

BS - Technology Management - Construction Management *(64-70 credits)*

Admission Requirements

- GPA: 2.50
- Math 196 is a prerequisite.

Program Requirements

38 credits: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, ETS 456, ETS 115, ETS 270, ETS 310; IS 242; MGMT 383.

Electives

Technical Electives (33 credits): Required: ETS 336, ETS 418, ETS 435, ETS 436, ETS 450. Select 6 credits from the MGMT department (or other courses with advisor approval). Electives: Select 12 credits from Groups A, B, C, D, E. GROUP A: Communications: ETS 312, ETS 314, ETS 325, ETS 413, ETS 423. GROUP B :Environment: ETS 262, ETS 360, ETS 375, ETS 463, ETS 465, ETS 467, ETS 469. GROUP C: Production: ETS 130, ETS 134, ETS 330, ETS 335, ETS 343, ETS 345, ETS 348, ETS 430, ETS 446, ETS 448, ETS 488. GROUP D: Transportation/Energy: ETS 185, ETS 186, ETS 482. GROUP E: Professional/Topical: ETS 400, ETS 405, ETS 414, ETS 444, ETS 495.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problem.
- Identify technological assessment and management skills that will enhance work in an entry level or a mid-level managerial position.
- Communicate and facilitate effectively in writing and speaking to groups and individuals by applying appropriate managerial skills.
- Apply mathematics and science to analyze and solve manufacturing problems.
- Compare the roles, purposes, and future directions of manufacturing industries and how each effects the impacts on the environment and society.

- Apply appropriate facilitation skills when working in groups to implement, control, and/or solve technological assessment and management problems in the industry, business, and society.
- Analyze basic manufacturing processes and the role, advantages, and disadvantages of CAD/CAM/CIM.
- Assess the purposes and procedures for planning, implementing, controlling, and evaluating manufacturing systems.
- Analyze the tools, materials, process and resources used in other technologies that are related to manufacturing industries.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of work within the manufacturing industries.

BS - Technology Management - Industrial Technology *(64-70 credits)*

Admission Requirements

- GPA: 2.50
- Math 196 is a prerequisite.

Program Requirements
38 credits: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, ETS 456, ETS 115, ETS 270, ETS 310; IS 242; MGMT 383.

Electives
Technical Electives (27 credits). ETS 312, ETS 343, ETS 345, ETS 348, ETS 430. Select 12 credits from Groups A, B, C, D, E. GROUP A: Communications: ETS 314, ETS 325, ETS 423. GROUP B: Environment: ETS 262, ETS 360, ETS 375, ETS 463, ETS 465, ETS 467, ETS 469. GROUP C: Production: ETS 130, ETS 134, ETS 330, ETS 335, ETS 336, ETS 436, ETS 448, ETS 488. GROUP D: Transportation/Energy: ETS 185, ETS 186, ETS 482. GROUP E: Professional/Topical: ETS 400, ETS 405, ETS 414, ETS 444, ETS 495.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problem.
- Identify technological assessment and management skills that will enhance work in an entry level or a mid-level managerial position.
- Communicate and facilitate effectively in writing and speaking to groups and individuals by applying appropriate managerial skills.
- Apply mathematics and science to analyze and solve manufacturing problems.
- Compare the roles, purposes, and future directions of manufacturing industries and how each effects the impacts on the environment and society.
- Apply appropriate facilitation skills when working in groups to implement, control, and/or solve technological assessment and management problems in the industry, business, and society.
- Analyze basic manufacturing processes and the role, advantages, and disadvantages of CAD/CAM/CIM.
- Assess the purposes and procedures for planning, implementing, controlling, and evaluating manufacturing systems.
- Analyze the tools, materials, process and resources used in other technologies that are related to manufacturing industries.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of work within the manufacturing industries.

BS - Manufacturing Engineering Technology *(101 credits)*

Admission Requirements

- GPA: 2.5
- Completion of these courses: MATH 113 or equivalent, MME 101, ECE 102, ETS 115, ETS 156, ETS 241.
- GPA of 2.5 in all major courses.

Program Requirements
(81 credits): MATH 211, STAT 239, CHEM 210, PHYS 231, ECON 205 or ECON 206, MME/ECE 101, MME/ECE 102, MME/ECE 380, MME 360, ETS 115,

ETS 156, ETS 183, ETS 260, ETS 312, ETS 314, ETS 343, ETS 345, ETS 348, ETS 446, ETS 448, ETS 456, ETS 240, ETS 241, ETS 242, ETS 243, ETS 340, ETS 440, ETS 457

Electives
Select 20 credits from the following: ETS 185, ETS 270, ETS 310, ETS 367, ETS 363, ETS 373, ETS 375, ETS 468, ETS 430, ETS 444, ETS 388, ETS 482, STAT 321, STAT 421, MME 334, MME 470, EM 460, MME 464

Successful completion of ETS 456 and ETS 457 with a C- or better meets the Upper Division Writing requirement.

Program Student Learning Outcomes

- Select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities.
- Select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies.
- Conduct standard tests and measurements; conduct, analyze, and interpret experiments; and apply experimental results to improve processes.
- Design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.
- Identify, analyze, and solve broadly-defined engineering technology problems. Function effectively as a member or leader on a technical team.
- Apply written, oral, and graphical communication in both technical and non-technical environments; and identify and use appropriate technical literature.
- Demonstrate a commitment to quality, timeliness, and continuous improvement.
- Define the need for and to engage in self-directed continuing professional development.
- Demonstrate an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- Demonstrate a knowledge of the impact of engineering technology solutions in a societal and global context.

BES - Environmental Studies-BES *(36 credits)*

Admission Requirements

- GPA: 2.50

Program Requirements
Select 36 credits from those courses listed in the Environmental Studies Major. Final selection of courses requires department approval. Technical Electives (9 credits): Select at least 3 credits from each of the following groups (approval of major advisor required). GROUP A - Environmental Studies: ETS 262, 360, 363, 373, 444, 463, 465, 467, 468, 482. GROUP B - Natural Sciences: BIOL 326, 436, CHEM 320, 440, AHS 305, 322, 325, 332, 334, 336, 338, 380, 423, 432, 434. GROUP C - Social Sciences: ANTH 352, ECON 451, GEOG 303, 316, 325, 372, 379, 394, 472, 473, 492, HIST 349, HLTH 482, MGMT 301.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Apply the scientific and quantitative literacy principles and concepts to real-world environmental problem solving experiences.
- Apply state-of-the-art environmental measuring instrumentation to the solution of common environmental problems.
- Conduct sound research principles to the solution of environmental problem in society.
- Research scientific literature and develop writing skills to enhance environmental

research projects and problems in both the private and public sector of society.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of environmental work within the private and public sector of society.
- Demonstrate effective and successful disposition in teamwork and leadership skills to improve the effectiveness of environmental work within the private and public sector of society.

BES - Technology Studies-BES *(36 credits)*

Admission Requirements

- GPA: 2.50

Program Requirements

Select 36 credits. Final selection of courses requires department approval. Communications: ETS 314, ETS 325, ETS 423. GROUP B: Environment: ETS 262, ETS 360, ETS 375, ETS 463, ETS 465, ETS 467, ETS 469. GROUP C:Production: ETS 130, ETS 134, ETS 330, ETS 335, ETS 336, ETS 436, ETS 448, ETS 488. GROUP D: Transportation/Energy: ETS 185, ETS 186, ETS 482. GROUP E: Professional/Topical: ETS 400, ETS 405, ETS 414, ETS 444, ETS 495.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Minor - Environmental Studies (BA) *(24 credits)*

Program Requirements

ETS 260, ETS 262; ECON 351.

Electives

Technical Electives (15 credits): At least six credits in Group A and at least three credits in Groups B and C chosen with the approval of the student's advisor. GROUP A - Environmental Studies: ETS 360, ETS 363, ETS 367, ETS 368, ETS 373, ETS 375, ETS 461, ETS 463, ETS 465, ETS 467, ETS 468, ETS 469, ETS 482. GROUP B - Natural Sciences: BIOL 312, BIOL 326, CHEM 160, CHEM 210, CHEM 211, CHEM 240, CHEM 320, AHS 220, AHS 230, AHS 260, AHS 334, PHYS 208. GROUP C - Social Sciences: ECON 451, GEOG 303, GEOG 316, GEOG 372, GEOG 379, GEOG 393, GEOG 394, GEOG 492, HIST 349, HLTH 482, PSY 323.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Apply the scientific and quantitative literacy principles and concepts to real-world environmental problem solving experiences.
- Apply state-of-the-art environmental measuring instrumentation to the solution of common environmental problems.
- Conduct sound research principles to the solution of environmental problem in society.
- Research scientific literature and develop writing skills to enhance environmental research projects and problems in both the private and public sector of society.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of environmental work within the private and public sector of society.
- Demonstrate effective and successful disposition in teamwork and leadership skills to improve the effectiveness of environmental work within the private and public sector of society.

Minor - Environmental Studies-BES *(15 credits)*

Program Requirements

Select 15 credits with the help of an advisor in Environmental Studies.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Apply the scientific and quantitative literacy principles and concepts to real-world environmental problem solving experiences.
- Apply state-of-the-art environmental measuring instrumentation to the solution of common environmental problems.

- Conduct sound research principles to the solution of environmental problem in society.
- Research scientific literature and develop writing skills to enhance environmental research projects and problems in both the private and public sector of society.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of environmental work within the private and public sector of society.
- Demonstrate effective and successful disposition in teamwork and leadership skills to improve the effectiveness of environmental work within the private and public sector of society.

Minor - Technology Studies (BA, BS) *(24 credits)*

Program Requirements

Select 12 credits from: ETS 322, ETS 363, ETS 373, ETS 374, ETS 375, ETS 388.

Electives

Select 12 credits from the five "Technical Electives" in the Technology Assessment and Management Major.

Minor - Technology Studies-BES *(15 credits)*

Program Requirements

Select 15 credits with the help of an advisor from Technology Management.

Environmental Science/Studies (BS, BES)

Environmental and Technological Studies

Chairperson: Kevin Haglin
Address: 216 Headley Hall
Phone: 320.308.3235
Email: ets@stcloudstate.edu
Website: www.stcloudstate.edu/ets

BS - Environmental Science *(86 credits)*

Admission Requirements

- GPA: 2.50
- MATH 112 is a prerequisite for several required courses.
- Completion of 3 of the following courses: ETS 260, ETS 367, ETS 373, ETS 375, ETS 461, BIOL 151, BIOL 152, BIOL 306 or BIOL 308, BIOL 312, CHEM 210, CHEM 211, CHEM 240, CHEM 350, AHS 220, AHS 230, AHS 260, PHYS 231, MGMT 301, STAT 239.

Notes

- Liberal Education requirements: Goal Area 3 Natural Sciences; Goal Area 4 Mathematical/Logical Reasoning; Goal Area 10 People and the Environment and half of Goal Area 5 History and Social and Behavioral Sciences are satisfied by this program.

Program Requirements

Interdisciplinary Science Core: BIOL 151, BIOL 152, BIOL 306 or BIOL 308, BIOL 312, CHEM 210, CHEM 211, CHEM 240, AHS 230, AHS 260, PHYS 231 or AHS 220 (approval of advisor required). Environmental Core: ETS 260, ETS 310, ETS 367, ETS 368, ETS 375, ETS 444, ETS 461, ETS 469, CHEM 350, ECON 351, ENGL 332, STAT 239.

Electives

Technical Electives: Select at least 3 credits from each of the following groups (approval of major advisor required). GROUP A - Environmental Studies: ETS 262, ETS 360, ETS 363, ETS 373, ETS 444, ETS 463, ETS 465, ETS 467, ETS 468, ETS 482. GROUP B - Natural Sciences: BIOL 326, BIOL 436, CHEM 320, CHEM 440, AHS 305, AHS 322, AHS 325, AHS 332, AHS 334, AHS 336, AHS 338, AHS 380, AHS 423, AHS 432, AHS 434. GROUP C - Social Sciences: ANTH 352, ECON 451, GEOG 303, GEOG 316, GEOG 325, GEOG 372, GEOG 379, GEOG 394, GEOG 472, GEOG 473, GEOG 492, HIST 349, HLTH 482, MGMT 301.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 461.

Program Student Learning Outcomes

- Compare and contrast technological systems used in society and how they relate to environmental problems.
- Apply scientific and quantitative literacy principles and concept to real-world environmental problem solving experiences.

- Critically examine the fate of major environmental contaminants based on their chemical properties and location within the ecosphere.
- Apply appropriate scientific literature and research principles to solving environmental problems in both the private and public sector of society.
- Demonstrate writing and presentation skills necessary to communicate scientific information to professional audiences.

BS - Environmental Studies *(66 credits)*

Admission Requirements

- GPA: 2.50
- Completion of 3 of the following courses: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, or ETS 456.

Notes

- In the Liberal Education program, Goal Areas 3, 4 and 10 as well as half of Area 5 are fulfilled by completion of the Environmental Studies curriculum.

Program Requirements

MATH 112 is a prerequisite for several of the courses. Department Core (22 credits): ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, ETS 456. Major Requirements (32-33 credits): ETS 262, ETS 310, ETS 367, ETS 368, ETS 375, ETS 469; CHEM 210; AHS 230; ECON 351; STAT 239.

Electives

Technical Electives 12 credits: At least six credits in Group A and at least three credits in Groups B and C chosen with the approval of the student's advisor. GROUP A-Technology Studies: ETS 360, ETS 444, ETS 463, ETS 465, ETS 467, ETS 468, ETS 482. GROUP B-Natural Sciences: BIOL 312, BIOL 326; CHEM 211, CHEM 240, CHEM 320; AHS 220, AHS 260, AHS 332, AHS 334; PHYS 208. GROUP C-Social Sciences: ANTH 352; CMTY 350, CMTY 451, CMTY 466; ECON 451; ENGL 332, ENGL 341; GEOG 303, GEOG 316, GEOG 325, GEOG 372, GEOG 379, GEOG 393, GEOG 394, GEOG 416, GEOG 472, GEOG 473, GEOG 492, GEOG 496; HIST 349, HIST 480; HLTH 482; MGMT 301; PSY 323: REC 412.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Apply the scientific and quantitative literacy principles and concepts to real-world environmental problem solving experiences.
- Apply state-of-the-art environmental measuring instrumentation to the solution of common environmental problems.
- Conduct sound research principles to the solution of environmental problem in society.
- Research scientific literature and develop writing skills to enhance environmental research projects and problems in both the private and public sector of society.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of environmental work within the private and public sector of society.
- Demonstrate effective and successful disposition in teamwork and leadership skills to improve the effectiveness of environmental work within the private and public sector of society.

BES - Environmental Studies-BES *(36 credits)*

Admission Requirements

- GPA: 2.50

Program Requirements

Select 36 credits from those courses listed in the Environmental Studies Major. Final selection of courses requires department approval. Technical Electives (9 credits): Select at least 3 credits from each of the following groups (approval of major advisor required). GROUP A - Environmental Studies: ETS 262, 360, 363, 373, 444, 463, 465, 467, 468, 482. GROUP B - Natural Sciences: BIOL 326, 436, CHEM 320, 440, AHS 305, 322, 325, 332, 334, 336, 338, 380, 423, 432, 434. GROUP C - Social Sciences: ANTH

352, ECON 451, GEOG 303, 316, 325, 372, 379, 394, 472, 473, 492, HIST 349, HLTH 482, MGMT 301.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Apply the scientific and quantitative literacy principles and concepts to real-world environmental problem solving experiences.
- Apply state-of-the-art environmental measuring instrumentation to the solution of common environmental problems.
- Conduct sound research principles to the solution of environmental problem in society.
- Research scientific literature and develop writing skills to enhance environmental research projects and problems in both the private and public sector of society.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of environmental work within the private and public sector of society.
- Demonstrate effective and successful disposition in teamwork and leadership skills to improve the effectiveness of environmental work within the private and public sector of society.

Manufacturing Engineering Technology (BS)

Environmental and Technology Studies

Chairperson: Kevin Haglin
Address: 216 Headley Hall
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Website: www.stcloudstate.edu/ets

BS - Manufacturing Engineering Technology *(101 credits)*

Admission Requirements

- GPA: 2.5
- Completion of these courses: MATH 113 or equivalent, MME 101, ECE 102, ETS 115, ETS 156, ETS 241.
- GPA of 2.5 in all major courses.

Program Requirements
(81 credits): MATH 211, STAT 239, CHEM 210, PHYS 231, ECON 205 or ECON 206, MME/ECE 101, MME/ECE 102, MME/ECE 380, MME 360, ETS 115, ETS 156, ETS 183, ETS 260, ETS 312, ETS 314, ETS 343, ETS 345, ETS 348, ETS 446, ETS 448, ETS 456, ETS 240, ETS 241, ETS 242, ETS 243, ETS 340, ETS 440, ETS 457

Electives
Select 20 credits from the following: ETS 185, ETS 270, ETS 310, ETS 367, ETS 363, ETS 373, ETS 375, ETS 468, ETS 430, ETS 444, ETS 388, ETS 482, STAT 321, STAT 421, MME 334, MME 470, EM 460, MME 464

Successful completion of ETS 456 and ETS 457 with a C- or better meets the Upper Division Writing requirement.

Program Student Learning Outcomes

- Select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities.
- Select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies.
- Conduct standard tests and measurements; conduct, analyze, and interpret experiments; and apply experimental results to improve processes.
- Design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.
- Identify, analyze, and solve broadly-defined engineering technology

problems. Function effectively as a member or leader on a technical team.
- Apply written, oral, and graphical communication in both technical and non-technical environments; and identify and use appropriate technical literature.
- Demonstrate a commitment to quality, timeliness, and continuous improvement.
- Define the need for and to engage in self-directed continuing professional development.
- Demonstrate an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- Demonstrate a knowledge of the impact of engineering technology solutions in a societal and global context.

Technology Education (BS)

Environmental and Technological Studies

Chairperson: Kevin Haglin
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BS - Technology Education *(48 credits)*

Admission Requirements

- GPA: 2.50
- ETS 182 is a requirement of this major. Students should enroll in ETS 182 as a part of their liberal education experience.
- Completion of 3 of the following courses: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, or ETS 456.
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Program Requirements

Department Core: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, ETS 456. Major Requirements: ETS 115, ETS 153, ETS 253, ETS 336, ETS 345, ETS 353.

Electives

Technical Electives: Select 9 credits from any of the following groups with no more than 3 credits from 100 level courses and no more than 3 credits from internships: Group A--Communications: ETS 312, ETS 314, ETS 325, ETS 411, ETS 413, ETS 423. Group B--Environment: ETS 262, ETS 360, ETS 375, ETS 463, ETS 465, ETS 467, ETS 469. Group C--Production: ETS 130, ETS 134, ETS 270, ETS 330, ETS 335, ETS 343, ETS 348, ETS 430, ETS 436, ETS 446, ETS 448. Grou D--Transportation: ETS 185, ETS 186, ETS 482. Group E--Professional/Topical: ETS 405, ETS 414, ETS 444, ETS 451, ETS 458.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Analyze the components of the Designed World as identified by the Standards for Technological Literacy.
- Identify the nature of technology within the context of the Designed World.
- Compare and contrast the relationships and impacts between technology and society in the context of the Designed World.
- Apply common design principles to the development of technology within the context of the Designed World.
- Identify common technology problems and design appropriate solutions to these problems within the context of the Design World.
- Design, implement and evaluate curricula based upon the Standards for Technological Literacy.
- Use a variety of effective teaching practices that enhance and extend learning of technology.
- Design, create, and manage learning environments that promote technological literacy. Apply the principles of student learning to a diverse learning style of students.

- Apply an engaging and comprehensive professional growth program to improve the teaching of technology.

Technology Management/Studies (BS, BES)

Environmental and Technological Studies

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BS - Technology Management - Construction Management *(64-70 credits)*

Admission Requirements

- GPA: 2.50
- Math 196 is a prerequisite.

Program Requirements
38 credits: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, ETS 456, ETS 115, ETS 270, ETS 310; STAT 242 or IS 242; MGMT 383.

Electives
Technical Electives (33 credits): Required: ETS 336, ETS 418, ETS 435, ETS 436, ETS 450. Select 6 credits from the MGMT department (or other courses with advisor approval). Electives: Select 12 credits from Groups A, B, C, D, E. GROUP A: Communications: ETS 312, ETS 314, ETS 325, ETS 413, ETS 423. GROUP B :Environment: ETS 262, ETS 360, ETS 375, ETS 463, ETS 465, ETS 467, ETS 469. GROUP C: Production: ETS 130, ETS 134, ETS 330, ETS 335, ETS 343, ETS 345, ETS 348, ETS 430, ETS 446, ETS 448, ETS 488. GROUP D: Transportation/Energy: ETS 185, ETS 186, ETS 482. GROUP E: Professional/Topical: ETS 400, ETS 405, ETS 414, ETS 444, ETS 495.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problem.
- Identify technological assessment and management skills that will enhance work in an entry level or a mid-level managerial position.
- Communicate and facilitate effectively in writing and speaking to groups and individuals by applying appropriate managerial skills.
- Apply mathematics and science to analyze and solve manufacturing problems.
- Compare the roles, purposes, and future directions of manufacturing industries and how each effects the impacts on the environment and society.
- Apply appropriate facilitation skills when working in groups to implement, control, and/or solve technological assessment and management problems in the industry, business, and society.
- Analyze basic manufacturing processes and the role, advantages, and disadvantages of CAD/CAM/CIM.
- Assess the purposes and procedures for planning, implementing, controlling, and evaluating manufacturing systems.
- Analyze the tools, materials, process and resources used in other technologies that are related to manufacturing industries.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of work within the manufacturing industries.

BS - Technology Management - Industrial Technology *(64-70 credits)*

Admission Requirements

- GPA: 2.50
- Math 196 is a prerequisite.

Program Requirements
38 credits: ETS 156, ETS 260, ETS 322, ETS 363, ETS 373, ETS 374, ETS 388, ETS 456, ETS 115, ETS 270, ETS 310; STAT 242 or IS 242; MGMT 383.

Electives
Technical Electives (27 credits). ETS 312, ETS 343, ETS 345, ETS 348, ETS 430. Select 12 credits from Groups A, B, C, D, E. GROUP A: Communications: ETS

314, ETS 325, ETS 423. GROUP B: Environment: ETS 262, ETS 360, ETS 375, ETS 463, ETS 465, ETS 467, ETS 469. GROUP C: Production: ETS 130, ETS 134, ETS 330, ETS 335, ETS 336, ETS 436, ETS 448, ETS 488. GROUP D: Transportation/Energy: ETS 185, ETS 186, ETS 482. GROUP E: Professional/Topical: ETS 400, ETS 405, ETS 414, ETS 444, ETS 495.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problem.
- Identify technological assessment and management skills that will enhance work in an entry level or a mid-level managerial position.
- Communicate and facilitate effectively in writing and speaking to groups and individuals by applying appropriate managerial skills.
- Apply mathematics and science to analyze and solve manufacturing problems.
- Compare the roles, purposes, and future directions of manufacturing industries and how each effects the impacts on the environment and society.
- Apply appropriate facilitation skills when working in groups to implement, control, and/or solve technological assessment and management problems in the industry, business, and society.
- Analyze basic manufacturing processes and the role, advantages, and disadvantages of CAD/CAM/CIM.
- Assess the purposes and procedures for planning, implementing, controlling, and evaluating manufacturing systems.
- Analyze the tools, materials, process and resources used in other technologies that are related to manufacturing industries.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of work within the manufacturing industries.

BES - Technology Studies-BES *(36 credits)*

Admission Requirements

- GPA: 2.50

Program Requirements

Select 36 credits. Final selection of courses requires department approval. Communications: ETS 314, ETS 325, ETS 423. GROUP B: Environment: ETS 262, ETS 360, ETS 375, ETS 463, ETS 465, ETS 467, ETS 469. GROUP C:Production: ETS 130, ETS 134, ETS 330, ETS 335, ETS 336, ETS 436, ETS 448, ETS 488. GROUP D: Transportation/Energy: ETS 185, ETS 186, ETS 482. GROUP E: Professional/Topical: ETS 400, ETS 405, ETS 414, ETS 444, ETS 495.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing ETS 456.

Minors

Environmental and Technology Studies

Chairperson: Kevin Haglin
Address: 216 Headley Hall
Phone: 320.308.3235
Email: ets@stcloudstate.edu
Website: www.stcloudstate.edu/ets

Minor - Environmental Studies (BA) *(24 credits)*

Program Requirements

ETS 260, ETS 262; ECON 351.

Electives

Technical Electives (15 credits): At least six credits in Group A and at least three credits in Groups B and C chosen with the approval of the student's advisor. GROUP A - Environmental Studies: ETS 360, ETS 363, ETS 367, ETS 368, ETS 373, ETS 375, ETS 461, ETS 463, ETS 465, ETS 467, ETS 468, ETS 469, ETS 482. GROUP B - Natural Sciences: BIOL 312, BIOL 326, CHEM 160, CHEM 210, CHEM 211, CHEM 240, CHEM 320, AHS 220, AHS 230, AHS 260, AHS 334, PHYS 208. GROUP C - Social Sciences: ECON 451, GEOG 303, GEOG 316, GEOG 372, GEOG 379, GEOG 393, GEOG 394, GEOG 492, HIST 349, HLTH 482, PSY 323.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of

these technological systems relates to environmental problems.
- Apply the scientific and quantitative literacy principles and concepts to real-world environmental problem solving experiences.
- Apply state-of-the-art environmental measuring instrumentation to the solution of common environmental problems.
- Conduct sound research principles to the solution of environmental problem in society.
- Research scientific literature and develop writing skills to enhance environmental research projects and problems in both the private and public sector of society.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of environmental work within the private and public sector of society.
- Demonstrate effective and successful disposition in teamwork and leadership skills to improve the effectiveness of environmental work within the private and public sector of society.

Minor - Environmental Studies-BES *(15 credits)*

Program Requirements
Select 15 credits with the help of an advisor in Environmental Studies.

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Apply the scientific and quantitative literacy principles and concepts to real-world environmental problem solving experiences.
- Apply state-of-the-art environmental measuring instrumentation to the solution of common environmental problems.
- Conduct sound research principles to the solution of environmental problem in society.
- Research scientific literature and develop writing skills to enhance environmental research projects and problems in both the private and public sector of society.
- Apply an engaging and comprehensive professional growth program to improve the effectiveness and quality of environmental work within the private and public sector of society.
- Demonstrate effective and successful disposition in teamwork and leadership skills to improve the effectiveness of environmental work within the private and public sector of society.

Minor - Technology Studies (BA, BS) *(24 credits)*

Program Requirements
Select 12 credits from: ETS 322, ETS 363, ETS 373, ETS 374, ETS 375, ETS 388.

Electives
Select 12 credits from the five "Technical Electives" in the Technology Assessment and Management Major.

Minor - Technology Studies-BES *(15 credits)*

Program Requirements
Select 15 credits with the help of an advisor from Technology Management.

MS

Environmental and Technological Studies

Chairperson: Kevin Haglin
Address: 216 Headley Hall
Phone: 320.308.3235
Email: ets@stcloudstate.edu
Website: www.stcloudstate.edu/ets

MS - Technology Education *(30 - 36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.

Plan A
Option(s): Thesis
Credits: 30
Core: 15 credits: ETS 601, ETS 604, ETS 668, ETS 650, ETS 673
Electives: 9 credits of ETS electives or other graduate courses approved by the advisor.
Research: 6 credits: ETS 699

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: 15 credits: ETS 601, ETS 604, ETS 650, ETS 668, ETS 673.
Electives: 21 credits of ETS electives or other graduate courses approved by the adviser
Research:

Program Student Learning Outcomes

- Compare and contrast all technological systems used in society and how each of these technological systems relates to environmental problems.
- Analyze the components of the Designed World as identified by the Standards for Technological Literacy.
- Identify the nature of technology within the context of the Designed World.
- Compare and contrast the relationships and impacts between technology and society in the context of the Designed World.
- Apply common design principles to the development of technology within the context of the Designed World.
- Identify common technology problems and design appropriate solutions to these problems within the context of the Design World.
- Design, implement and evaluate curricula based upon the Standards for Technological Literacy.
- Use a variety of effective teaching practices that enhance and extend learning of technology.
- Design, create, and manage learning environments that promote technological literacy. Apply the principles of student learning to a diverse learning style of students.
- Apply an engaging and comprehensive professional growth program to improve the teaching of technology.

Ethnic & Women's Studies

BA, BES and Minor

Ethnic and Women's Studies

Chairperson: Christopher Lehman
Address: 51B 227
Phone: 320.308.4928
Website: www.stcloudstate.edu/ews

BA - Gender and Women's Studies *(36 credits)*

- Admission RequirementsCompletion of GWS 201, with a grade of 2.0 or better, completion of 15 credits, meeting with a GWS advisor.

Notes

- BA Women's Studies majors must elect a second major or a minor program of study.

Program Requirements
21 credits: GWS 201, GWS 270, GWS 315, GWS 340, GWS 415, GWS 485; ETHS 405 or GWS 405.

Electives
15 credits: Courses by approval of GWS advisor from the list of approved electives on the program website. With approval of the women's studies advisor, electives may include new courses with a women's studies focus offered under departmental seminar numbers, or as experimental courses, or as workshops. Four credits of an internship in women's studies may be counted toward the major.

Students fulfill the University's Upper Division Writing Requirement by successfully completing GWS 415.

Program Student Learning Outcomes

- Students will develop a foundation of Women's Studies ideas, theories, and frameworks of analysis around both national and global issues.
- Students will learn how to develop intersectional analysis of race, class, gender, sexuality, and geographic or national location as they study contemporary issues and systems of oppression.
- Students will learn diverse feminist methodologies for feminist research and analytical practices and become familiar

with the types of analytical questions relevant to a Women's Studies analysis.
- Students will be exposed to the interdisciplinary nature of Women's Studies by taking courses in a variety of disciplines and by considering the interdisciplinary nature of scholarship and issues in the field.
- Students will become adept at applying Women's Studies concepts and frameworks of analysis to a variety of contemporary women.

Minor - African American Studies (BA, BS) *(18 credits)*

Program Requirements
6 credits: ETHS 220 and three credits from the following: ETHS 308, ETHS 408, ETHS 470, ETHS 570.

Electives
12 credits from the following: AFST 250, ANTH 312, ENGL 216, ENGL 307, ETHS 201, ETHS 405 or WS 405, HIST 350, HIST 357, HURL 201, HURL 408, HURL 491, HURL 492, MUSM 126, MUSM 229, POL 335, WS 340.

Program Student Learning Outcomes

- Demonstrate awareness and understanding of the historical and contemporary social, political, and economic statuses of African Americans in the United State.
- Explain the concept of "race'.
- Analyze current events and conditions concerning African Americans at the local, statewide, and national levels using course theories and concepts.
- Identify forms of institutional discrimination against African Americans in areas such as education, media, housing, employment, economics, politics, and the legal system.
- Describe the basic history of discrimination against and contributions of African Americans.
- Engage in dialogue and self-reflection concerning discrimination against African Americans, oppression of African Americans, and white privilege.

Minor - American Indian Studies (BA, BS, BES) *(18 credits)*

Program Requirements
9 credits: ETHS 210, ETHS 410; HIST 352.

Electives
9 credits: Select from the following list of courses with approval by American Indian Studies minor advisor: ANTH 159; ENGL 215, ENGL 315; ETHS 199, ETHS 299, ETHS 301, ETHS 305, ETHS 310, ETHS 312, ETHS 399, ETHS 401; HURL 407. Other courses offered irregularly, such as Ojibwe Language, History and Culture and special topics courses, may count toward the minor with approval of American Indian Studies minor advisor.

Program Student Learning Outcomes

- Describe the roles sovereignty and treaties have for indigenous entities in the United States.
- Provide examples of diversity among and within indigenous entities.
- Identify and distinguish various forms of artistic, literary and cultural expressions of indigenous entities.
- Explain how continuity and change contribute to contemporary issues facing indigenous entities.
- Evaluate governmental policies which have contributed to the current conditions of indigenous entities.
- Contrast Indigenous and Western philosophies that shape ways of knowing and learning.
- Analyze and critique current jurisdictional policies that are failing Indigenous women.

Minor - Asian Pacific American Studies (BA, BS) *(18 credits)*

Program Requirements
9 credits: ETHS 215, ETHS 425; one of the following: ETHS 313 or ANTH 313, ETHS 335, ETHS 345.

Electives
9 credits: ANTH 311; ETHS 335, ETHS 345; ETHS 313 or ANTH 313, ETHS 315 or ANTH 315, ETHS 472 or ANTH 472; HIST 467; ETHS 199, ETHS 299, ETHS 399, ETHS 401 (with approval of APA advisor).

Program Student Learning Outcomes

- Show demonstrated knowledge of the diverse social, historical, and cultural experiences of the various Asian Pacific American groups residing in the United States.
- Show demonstrated knowledge of the central issues which confront Asian Pacific American communities.
- Analyze transnational movements, representation in popular culture, gender roles, and the important contributions of people of Asian Pacific ancestry.
- Engage in comparative studies of the Asian homelands with the overseas Diaspora communities.

Minor - Chicana/o Studies (BA, BS) *(18 credits)*

Program Requirements
9 credits: ETHS 205, ETHS 407. Select one of the following courses: ETHS 307, ETHS 325, ETHS 350, ETHS 475; or LAST 350.

Electives
9 credits: ED 457; ENGL 317; ETHS 201, ETHS 305, ETHS 307, ETHS 325, ETHS 401, ETHS 405; ETHS 475; ETHS 350 or LAST 350; GEOG 373; HIST 354; LAST 250, LAST 370; POL 333. Other courses offered may count for the minor with the approval of Chicana/o Studies advisor.

Program Student Learning Outcomes

- Students will demonstrate knowledge the interdisciplinary field of Chicana/o Studies.
- Students will draw from theoretical and investigative methods to examine multiple sources and processes of social change.
- Students will engage in scholarship that examines themes and tropes in historical and contemporary contexts which shape the trajectory of the discipline.
- Students will utilize critical and analytical skills to analyze social, political, and cultural expressions.
- Students will analyze interpretations of Chicana/o experience through major processes that shape the formation of Chicana/o identities.

Minor - American Indian Studies-BES *(18 credits)*

Program Requirements
9 credits: ETHS 210, ETHS 410; HIST 352.

Electives
9 credits: Select from the following list of courses with approval by American Indian Studies minor advisor: ANTH 159; ENGL 215, ENGL 315; ETHS 199, ETHS 299, ETHS 301, ETHS 305, ETHS 310, ETHS 312, ETHS 399, ETHS 401; HURL 407. Other courses offered irregularly, such as Ojibwe Language, History and Culture and special topics courses, may count toward the minor with approval of American Indian Studies minor advisor.

Minor - Chicana/o Studies-BES *(18 credits)*

Program Requirements
ETHS 205, ETHS 407. Select one of the following courses: ETHS 475, ETHS 307, ETHS 325, ETHS 350 or LAST 350.

Electives
9 credits: ETHS 475; ED 457; ENGL 317; ETHS 201, ETHS 305, ETHS 307, ETHS 325, ETHS 401, ETHS 405; ETHS/LAST 350; GEOG 373; HIST 354; LAST 250, LAST 370; POL 333. Other courses offered may count for the minor with the approval of Chicana/o Studies advisor.

Program Student Learning Outcomes

- Students will demonstrate knowledge the interdisciplinary field of Chicana/o Studies.
- Students will draw from theoretical and investigative methods to examine multiple sources and processes of social change.
- Students will engage in scholarship that examines themes and tropes in historical and contemporary contexts which shape the trajectory of the discipline.
- Students will utilize critical and analytical skills to analyze social, political, and cultural expressions.
- Students will analyze interpretations of Chicana/o experience through major processes that shape the formation of Chicana/o identities.

Minor - Ethnic Studies (BA, BS) *(18 credits)*

Notes

- With approval of the Ethnic Studies chair, up to 6 credits may be taken in other courses with an ethnic studies focus offered as new courses, special topics or issues classes, seminars, experimental classes or workshops.
- Up to 6 credits of an internship in Ethnic Studies may be counted toward the minor.

Program Requirements
6 credits: ETHS 111 or 201, ETHS 401.

Electives
12 credits: Electives from the following courses with approval by the ETHS advisor: CMST 330; ENGL 215, ENGL 216, ENGL 307, ENGL 315, ENGL 316, ENGL 317; ETHS 205, ETHS 210, ETHS 215, ETHS 220, ETHS 301, ETHS 305, ETHS 307, ETHS 308, ETHS 310, ETHS 312, ETHS 313, ETHS 315, ETHS 325, ETHS 335, ETHS 345, ETHS 350, ETHS 405, ETHS 407, ETHS 408, ETHS 410, ETHS 425, ETHS 444, ETHS 470, ETHS 472, ETHS 475, ETHS 490; HIST 350, HIST 352, HIST 354; HURL 201, HURL 206 or HURL 496, HURL 497; MUSM 229, POL 492; SOC 268, SOC 468.

Program Student Learning Outcomes

- DEFINE the basic concepts of race, ethnicity, racism, prejudice, and discrimination.
- IDENTIFY social forces and institutions affecting race relations in the United States.
- DESCRIBE the life experiences of members of these groups beyond societal stereotypes.
- ANALYZE the historic experiences of difference racial and ethnic groups in the United States and how they become a part of U.S. society.
- COMPARE AND CONTRAST the perspectives of diverse groups.
- EXPLORE these groups contributions to U.S. society and world civilization.
- APPLY a global perspective through comparative analyses of racial and ethnic issues across societies.
- EVALUATE empirical and scientific approaches to the study of race and ethnic relations.
- APPLY critical communication skills through oral and written work about race and ethnicity in the U.S.
- SYNTHESIZE the relation between gender, sexuality, and race and ethnicity.

Minor - Gender and Women's Studies (BA, BS) *(18 credits)*

Program Requirements
12 credits: GWS 201, GWS 270, GWS 415; ETHS 405 or GWS 405.

Electives
6 credits: In consultation with GWS advisor, select electives from list of approved courses on program website. With approval of the women's studies advisor, electives may include new courses with a women's studies focus offered under departmental seminar numbers, experimental courses, or workshops. Four credits of an internship in women's studies may be counted toward the minor.

Program Student Learning Outcomes

- Students will develop a foundation of Women's Studies ideas, theories, and frameworks of analysis around both national and global issues.
- Students will learn how to develop intersectional analysis of race, class, gender, sexuality, and geographic or national location as they study contemporary issues and systems of oppression.
- Students will learn diverse feminist methodologies for feminist research and analytical practices and become familiar with the types of analytical questions relevant to a Women's Studies analysis.
- Students will be exposed to the interdisciplinary nature of Women's Studies by taking courses in a variety of disciplines and by considering the interdisciplinary nature of scholarship and issues in the field.
- Students will become adept at applying Women's Studies concepts and frameworks of analysis to a variety of contemporary women.

Finance, Insurance & Real Estate

BS, BES and Minor

Finance, Insurance and Real Estate

Chairperson: Joseph Haley
Address: 463 Centennial Hall
Phone: 320.308.4986
Website: www.stcloudstate.edu/fire

BS - Finance *(88 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements

Business Core (22 credits): HBS 211, MGMT 201, MKTG 220, FIRE 371, IS 340, MGMT 383, MGMT 497, MKTG 333 or ENGL 332 or CMST 341. Finance Major Required Courses (21 credits): FIRE 373, FIRE 375, FIRE 378, FIRE 471, FIRE 472; ECON 471; ACCT 371.

Electives

Select at least four electives, one from Group I, two from Group II and one from Group III (12 credits). Group I: FIRE 473, FIRE 474, FIRE 481, FIRE 487. Group II: FIRE 372, FIRE 386, FIRE 473, FIRE 474, FIRE 475, FIRE 476, FIRE 479, FIRE 480, FIRE 481, FIRE 483, FIRE 484, FIRE 487, FIRE 490, FIRE 498. Group III: FIRE 372, FIRE 386, FIRE 427, FIRE 473, FIRE 474, FIRE 475, FIRE 476, FIRE 479, FIRE 480, FIRE 481, FIRE 483, FIRE 484, FIRE 487, FIRE 490, FIRE 498; ACCT 482, ACCT 483; MKTG 415, BLAW 434, BLAW 436; MGMT 462, MGMT 365, MGMT 479, MGMT 452, MGMT 470; MATH 211, MATH 212, MATH 222, MATH 312; PHIL 481; CMST 211, CMST 213, CMST 341, CMST 441; ECON 405, ECON 406, ECON 417, ECON 460, ECON 470, ECON 472, ECON 485, ECON 486; IS 150, IS 341, IS 356.

Students fulfill the University's Upper Division Writing Requirement by successfully completing FIRE 378.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major.

Finance majors will be able to apply finance knowledge/theories to analyze real-world problems; apply equity valuation techniques, as bond, stock, or option valuations, in domestic and/or global financial markets; and apply risk-management techniques, as diversification or risk-hedging in domestic and/or global financial markets.

BS - Real Estate *(88 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements

Business Core (22 credits): HBS 211, MGMT 201, MKTG 220, FIRE 371, IS 340, MGMT 383, MGMT 497, MKTG 333 or ENGL 332 or CMST 341. Real Estate Major Required Courses (24 credits): FIRE 375, FIRE 378, FIRE 386, FIRE 483, FIRE 484; BLAW 434; ECON 465, CMTY 200.

Electives

Courses selected in consultation with advisor. Select 9 credits from one of the following areas: brokerage management, sales and marketing, building and construction, finance and investments, planning and development, real estate appraisal, property management, and insurance.

Students fulfill the University's Upper Division Writing Requirement by successfully completing FIRE 378.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Real estate majors will be able to explain and calculate a real estate investment analysis, recognizing the critical elements from the investor's viewpoint, including the tax impact; describe the critical elements of real estate financing, both residential and commercial (including both the primary and secondary mortgage markets); and describe and apply the real estate

appraisal principles, including the three approaches in the appraisal process.

Minor - Finance-BES *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university course work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in the 300 and 400 level courses. Department permission required for all other students.

Program Requirements

ACCT 291, ACCT 292; BLAW 235, FIRE 371, FIRE 375, FIRE 378

Electives

6 credits from 300-400 level FIRE department courses elected from area of finance (approved in advance by minor advisor).

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with an value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Finance majors will be able to apply finance knowledge/theories to analyze real-world problems; apply equity valuation techniques, as bond, stock, or option valuations, in domestic and/or global financial markets; and apply risk-management techniques, as diversification or risk-hedging in domestic and/of global financial markets.

Minor - Real Estate-BES *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university course work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in the 300 and 400 level courses. Department permission required for all other students.

Program Requirements

ACCT 291, ACCT 292; BLAW 235, FIRE 371, FIRE 375, FIRE 378

Electives

6 credits from 300-400 level FIRE department courses elected from area of real estate (approved in advance by minor advisor).

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will de4mosntrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Finance majors will be able to apply finance knowledge/theories to analyze real-world problems; apply equity valuation techniques, as bond, stock, or option valuations, in domestic and/or global financial markets; and apply risk-management techniques, as diversification or risk-hedging in domestic and/or global financial markets.

Minor - Finance - Business Majors *(15 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements

Five upper-division FIRE courses in finance selected with the prior approval of the student's minor advisor. Note: Non-FIRE majors would ordinarily be required to include FIRE 373, FIRE 375, and FIRE 378 as three of the five courses.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Finance majors will be able to apply finance knowledge/theories to analyze real-world problems; apply equity valuation techniques, as bond, stock, or option valuations, in domestic and/or

global financial markets; and apply risk-management techniques, as diversification or risk-hedging in domestic and/or global financial markets.

Minor - Finance Non-Business Majors *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who Select to minor in business may take no more than 30 credits of their total university course work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in the 300 and 400 level courses. Department permission required for all other students.

Program Requirements

ACCT 291, ACCT 292; BLAW 235, FIRE 371, FIRE 375, FIRE 378

Electives

6 credits from 300-400 level FIRE department courses elected from area of finance (approved in advance by minor advisor).

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Real estate majors will be able to explain and calculate a real estate investment analysis, recognizing the critical elements from the investor's viewpoint, including the tax impact; describe the critical elements of real estate financing, both residential and commercial (including both the primary and secondary mortgage markets); and describe and apply the real estate appraisal principles, including the three approaches in the appraisal process.

Minor - Real Estate - Business Majors *(15 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 l evel courses. Department permission required for all other students.

Program Requirements

Five upper-division FIRE courses in real estate, selected with the prior approval of the student's minor advisor. Note: Non-FIRE majors would ordinarily be required to include FIRE 373, FIRE 375, and FIRE 378 as three of the five courses.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will de4mosntrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Finance majors will be able to apply finance knowledge/theories to analyze real-world problems; apply equity valuation techniques, as bond, stock, or option valuations, in domestic and/or global financial markets; and apply risk-management techniques, as diversification or risk-hedging in domestic and/or global financial markets.

Minor - Real Estate Non-Business Majors *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university course work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in the 300 and 400 level courses. Department permission required for all other students.

Program Requirements

ACCT 291, ACCT 292; BLAW 235, FIRE 371, FIRE 375, FIRE 378

Electives

6 credits from 300-400 level FIRE department courses elected from area of real estate (approved in advance by minor advisor).

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will de4mosntrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives

for this goal are different for each major. Finance majors will be able to apply finance knowledge/theories to analyze real-world problems; apply equity valuation techniques, as bond, stock, or option valuations, in domestic and/or global financial markets; and apply risk-management techniques, as diversification or risk-hedging in domestic and/or global financial markets.

Certificate

Finance, Insurance and Real Estate

Chairperson: Joseph Haley
Address: 463 Centennial Hall
Phone: 320.308.4986
Website: www.stcloudstate.edu/fire

Certificate - Insurance *(15 credits)*

Notes

- Any admitted student in the university may apply for the Insurance Certificate Program.

Program Requirements

This program provides coursework leading to eligibility for a certificate. The Insurance Certificate is earned by passing (with a grade of C- or better) the five required classes: FIRE 375, FIRE 475, FIRE 476, FIRE 479, FIRE 480.

Program Student Learning Outcomes

- Our students will be competent in their respective disciplines/majors.

General Business

Minor

Marketing

Chairperson: Dennis Bristow
Address: 462 Centennial Hall
Phone: 320.308.2057
Email: mkbl@stcloudstate.edu
Website: www.stcloudstate.edu/mkbl

BS - General Business *(82 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements

Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341

Electives

Select 27 credits from 300-400 level courses from at least three of the following ten areas: Accounting (12 credits max); Business Law (12 credits max); Entrepreneurship (6 credits max); Finance (12 credits max); Information Systems (12 credits max); Insurance (12 credits max); Management (12 credits max); Marketing (12 credits max); Real Estate (12 credits max); Economics and/or other departments outside the Business School (3 credits max).

Students fulfill the University's Upper Division Writing Requirement by successfully completing MKTG 333.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Minor - General Business: Non-Business Majors *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
ACCT 291; BLAW 235; MGMT 201; MKTG 220.

Electives
OPTION 1: MKTG 100 and 9 elective credits from 300/400 level. Herberger Business School courses (no more than 6 credits from any one of the following eight areas: (1) accounting; (2) information systems; (3) business law; (4) finance; (5) insurance; (6) management; (7) marketing; (8) real estate. OPTION 2: 12 elective credits from 300/400 level Herberger Business School courses (no more than 6 credits from any one of the following eight areas: 1) accounting; 2) information systems; 3) business law; 4) finance; 5) insurance; 6) management; 7) marketing; 8) real estate.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Minor - General Business-BES *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
ACCT 291; BLAW 235; MGMT 201; MKTG 220.

Electives
OPTION 1: MKTG 100 and 9 elective credits from 300/400 level. Herberger Business School courses (no more than 6 credits from any one of the following nine areas: (1) accounting; (2) information systems; (3) business law; (4) finance; (5) insurance; (6) management; (7) marketing; (8) real estate; (9) entrepreneurship. OPTION 2: 12 elective credits from 300/400 level Herberger Business School courses (no more than 6 credits from any one of the following nine areas: 1) accounting; 2) information systems; 3) business law; 4) finance; 5) insurance; 6) management; 7) marketing; 8) real estate; (9) entrepreneurship.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Geography & Planning

British Studies Minor

Geography and Planning

Chairperson: David Wall
Address: 359 Stewart Hall
Phone: 320.308.3160
Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp

Minor - British Studies *(20-22 credits)*

Admission Requirements

- GPA: 2.50

Notes

- *BRIT 101 and 201 may together be substituted with a 3-credit independent study taken with a previous or current director of the British Studies Program that meets the course SLOs of those courses, with prior approval. Alternatively, participation in a short-term education abroad program may substitute for BRIT 101 and 201 (if short-term program is 3 credits) plus BRIT 250 (if short-term program is 6 credits) with prior approval.
- Alternatively, these courses may be substituted with those taken at UK universities with approval.

Program Requirements
Required (8-10): BRIT 101, BRIT 201*; BRIT 250 or GEOG 384; HIST 235 or HIST 335 (or HIST 483 with approval).

Electives
12 Cr. Minimum: ENGL 321, ENGL 322, ENGL 323, ENGL 325, ENGL 326, ENGL 327, ENGL 328, ENGL 423, ENGL 424, ENGL 465 (no more than two ENGL courses may be counted towards the minor); GEOG 374, GEOG 384; HIST 135 or HIST 337; PHIL 252; POL 331; or other courses (though no more than two courses from the same rubric) with approval of the British Studies Subcommittee.

Minor - British Studies BES Minor *(20-22 credits)*

Program Requirements
BRIT 101, BRIT 201; BRIT 250 or GEOG 384; HIST 235 or HIST 335 (or HIST 483 with approval)

Electives
12 credits approved by British Studies Advisor

Geographic Information Science Minor

Geography and Planning

Chairperson: David Wall
Address: 359 Stewart Hall
Phone: 320.308.3160
Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp

Minor - Geographic Information Science *(24 credits)*

Program Requirements
GEOG 216, GEOG 316, GEOG 350, GEOG 406, GEOG 407, GEOG 416, GEOG 450, GEOG 462. Up to 9 credits may be double counted for geography majors.

Program Student Learning Outcomes

- Students will exhibit a fundamental understanding of core concepts and principles of Geographic Information Science.
- Students will be able to create geospatial databases.
- Students will be able to design effective maps.
- Students will be able to solve spatial problems using various techniques in spatial statistics and analysis.
- Students will demonstrate their knowledge and mastery of spatial technologies.

Geographic Information Science MS and Certificate

Geography and Planning

Chairperson: David Wall
Address: 359 Stewart Hall
Phone: 320.308.3160
Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp

MS - Geography: Geographic Information Science concentration *(30-33 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is required.
- Students should have at least a minor in Geography in their undergraduate degree. See program website for options available to students without any Geography in their undergraduate program.

Notes

- Teaching Applicants should see the Department Chair.
- Students may be required to complete an undergraduate level software applications course in geography prior to enrolling in graduate-level courses.

Plan A
Option(s): Thesis
Credits: 30
Core: (18 credit minimum): GEOG 506, GEOG 507, GEOG 516, GEOG 550, GEOG 562, GEOG 605
Electives: (3 credit minimum): Students should select electives in consultation with the graduate advisor.
Research: (9 credit minimum): GEOG 610, GEOG 699

Plan B
Option(s): Starred Paper(s)
Credits: 33
Core: (18 credit minimum): GEOG 506, GEOG 507, GEOG 516, GEOG 550, GEOG 562, GEOG 605
Electives: (12 credit minimum): Students should select electives in consultation with the graduate advisor.
Research: (3 credit minimum): GEOG 610.

Certificate - Geography Information Science *(15 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.

Notes

- Students may be required to complete an undergraduate level software applications course in geography prior to enrolling in graduate-level courses.

Program Requirements
This program provides coursework leading to eligibility for a graduate certificate. GEOG 506, GEOG 507, GEOG 516, GEOG 550, GEOG 562

Program Student Learning Outcomes

- To provide our students with a solid foundation in analytical tools (mathematical and computational), spatial sciences and design, in order to develop practical and professional excellence in our future graduates.
- To meet the requirements set by the Minnesota Board of AELSLAGID for each student's individual education.
- To provide our students with opportunities to engage in creative problem-solving activities through planning, design and implementation of a range of surveying projects, within the context of continuously changing natural, organizational and global settings.
- To provide our students with an understanding of the roles and responsibilities of their profession and themselves within organizations, within society and in a global context, including an appreciation of the need for life-long learning.

Geography BA, BES and Minor

Geography and Planning

Chairperson: David Wall
Address: 359 Stewart Hall
Phone: 320.308.3160
Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp

BA - Geography *(36 credits)*

Notes

- This major requires either one year in a single foreign language OR a minor.

Program Requirements
18 credits: GEOG 106 or GEOG 111, GEOG 216, GEOG 270 or GEOG 271, GEOG 272, GEOG 390, GEOG 432.

Electives
Electives (18 credits) must be upper division courses--internships are in addition to the 36 credits. A minimum of 3 credits and a maximum of 6 credits (of the 18 upper division) taken from regional courses (GEOG 368, GEOG 369, GEOG 373, GEOG 374, GEOG 376, GEOG 378, GEOG 384); GEOG 410 may be substituted with approval of advisor.

Completion of GEOG 432 with a grade of C- or better fulfills the university's upper division writing requirement.

Program Student Learning Outcomes

- Understand spatial processes and patterns at the local, national and global scales.
- Understand and appropriately apply geographic methods.
- Understand the key concepts of place, space, landscape and region.
- Understand globalization processes and effects.

BES - Geography-BES *(36 credits)*

Program Requirements
36 credits in geography with approval of major advisor. This option allows students, in conjunction with their advisor, the opportunity to design a specialized program in BES-Geography.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing GEOG 432 with a 'C-' or better.

Minor - Geography *(24 credits)*

Program Requirements
12 credits: GEOG 106 or GEOG 111, GEOG 216, GEOG 270 or GEOG 271, GEOG 272.

Electives
12 credits of electives 300/400 courses.

Minor - Geography-BES *(24 credits)*

Program Requirements
Completion of any 24 credits in geography with approval of advisor.

Geography: Tourism Planning and Development MS

Geography and Planning

Chairperson: David Wall
Address: 359 Stewart Hall
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Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp

MS - Geography: Tourism Planning and Development Concentration *(30-32 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is required.
- Students should have at least a minor in Geography in their undergraduate degree. See program website for options available to students without any Geography in their undergraduate program.

Notes

- Teaching Applicants should see the Department Chair.

Plan A
Option(s): Thesis
Credits: 30
Core: (12 credit minimum): GEOG 596, GEOG 601, GEOG 630, GEOG 654

Electives: (9 credit minimum): Students should select electives in consultation with the graduate advisor.
Research: (9 credit minimum): GEOG 610, GEOG 699

Plan B
Option(s): Starred Paper(s)
Credits: 32
Core: (12 credit minimum): GEOG 596, GEOG 601, GEOG 630, GEOG 654
Electives: (17 credit minimum): Students should select electives in consultation with the graduate advisor.
Research: (3 credit minimum): GEOG 610

Program Student Learning Outcomes

- Attain basic graduate-level knowledge in how physical and human factors influence global and local spatial processes and patterns and are expressed in specific places and landscapes.
- Able to identify and distinguish between different theories and traditions in geography.
- Apply theoretical concepts of geography to a range of contemporary issues (e.g., conservation of natural resources, environmental assessment, urban planning, public health, economic development, cultural change) to offer practical solutions.
- Ability to conduct research applying theory applications, data collection, appropriate hypotheses testing with statistics, GIS and/or other recognized tools of geographical analysis.
- Demonstrate adequate levels of oral and writing skills needed for presentation of research results in on- and off-campus public presentations.
- Basic skills needed to apply for research funding.

Land Surveying/Mapping Sciences BS, BES, Minor and Certificate

Geography and Planning

Chairperson: David Wall
Address: 359 Stewart Hall
Phone: 320.308.3160
Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp

BS - Land Surveying/Mapping Sciences *(60 credits)*

- Admission RequirementsAssociates Degree in related program at a two-year college.

Notes

- Must have an Associate degree, certificate or diploma from a Community or Technical College that has an articulated agreement with SCSU. (Please contact SCSU Admissions Office for list of articulated colleges.)
- During Academic Year 2012-2013 8 students graduated with the B.S. degree.
- Program objectives for this ASAC ABET accredited program are: a) Prepare graduates for employment commensurate of a four year Bachelor of Science degree; b) Prepare graduates to be actively engaged in their profession; c) Cultivate continued expansion of knowledge base in land surveying and mapping science areas through life-long learning; d) Prepare graduates for leadership roles as they advance through their careers.
- Please note that ASAC ABET accreditation expires September 30, 2018.

Program Requirements
GEOG 216, GEOG 316, GEOG 335, GEOG 336, GEOG 350, GEOG 394, GEOG 406, GEOG 416, GEOG 433, GEOG 435, GEOG 436, GEOG 438, GEOG 439, GEOG 444, GEOG 455, GEOG 462; MATH 221, MATH 222, MATH 229 or STAT 239. Up to 12 credits can be doubled counted toward the GIS minor.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing GEOG 439.

Program Student Learning Outcomes

- Ability to apply knowledge of mathematics, science, and applied sciences.
- Design and conduct experiments, as well as to analyze and interpret data.
- Formulate or design a system, process, or program to meet desired needs.
- Function on multidisciplinary teams; communicate effectively.
- Identify and solve applied science problems.
- Understand professional and ethical responsibility.
- Possess the broad education necessary to understand the impact of solutions in a global and societal context.
- Recognize the need for and an ability to engage in life-long learning.
- Possess a knowledge of contemporary issues.
- Use the techniques, skills, and modern scientific and technical tools necessary for professional practice.

BES - Land Surveying/Mapping Sciences-BES *(45 credits)*

Notes

- Eligibility to take the Fundamentals of Land Surveying (FS) exam is contingent upon completing elective courses approved by a Land Surveying advisor.

Program Requirements
GEOG 335, GEOG 336, GEOG 439.

Electives
Select 27 credits: GEOG 316, GEOG 350, GEOG 394, GEOG 416, GEOG 406, GEOG 433, GEOG 436, GEOG 438, GEOG 444, GEOG 455, GEOG 462. Supporting Courses (9 credits): Minimum of 6 credits of 200 level or higher calculus and a minimum of 3 credits of 200 level or higher statistics.

Students fulfill the University's Upper Division Writing Requirement by successfully completing GEOG 439.

Minor - Land Surveying/Mapping Science-BES *(24 credits)*

Program Requirements
Completion of 24 credits in geography with approval of advisor.

Certificate - Land Surveying/Mapping Sciences *(24 credits)*

- Admission RequirementsMust have Baccalaureate degree.

Program Requirements
GEOG 335, GEOG 336, GEOG 439.

Electives
Select 15 credits from the following: GEOG 433, GEOG 435, GEOG 436, GEOG 438, GEOG 444, GEOG 455.

Program Student Learning Outcomes

- Integrate and apply knowledge from basic mathematical and scientific disciplines to solve technical problems, both inside and outside the classroom.
- Broad-based integrated knowledge (classroom, practical and professional) that will enhance their ability to solve technical, administrative, professional, ethical and legal problems as members of the surveying profession.
- Recognized as possessing excellent practical and professional skills.
- Successful in becoming registered as professional surveyors and taking up leadership positions in the profession.
- Value their professional standing, enhance their skills and ability through life-long learning, and be able to work in a global and multi-cultural environment.

Planning and Community Development BA and Certificate

Geography and Planning

Chairperson: David Wall
Address: 359 Stewart Hall
Phone: 320.308.3160
Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp

BA - Planning and Community Development *(42 credits)*

Notes

- This major requires either one year in a single foreign language or a minor.
- This major is effective Spring 2018.

Program Requirements

42 credits: CMTY 200, CMTY 333, CMTY 350, CMTY 354, CMTY 363, CMTY 367, CMTY 369, CMTY 422, CMTY 444, CMTY 450, CMTY 451, CMTY 452, CMTY 454, CMTY 464

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMTY 350 with a grade of C or better.

Program Student Learning Outcomes

- Fully comprehend the basic physical, social, and economic characteristics of urban, suburban, and rural communities, together with the key problems and issues facing these communities and strategies used by Community Development and Planning professionals to address these issues.
- Basic interpersonal communication, oral and written communication, research, analytical, and teamwork skills to become a successful Community Development professional.

BA - Planning and Community Development - Diversity Planning *(60 credits)*

Admission Requirements

- GPA: 2.55
- Completion of at least 12 semester credits overall, 9 of which must be from SCSU.

Notes

- This program is not accepting new students.

Program Requirements

CMTY 200, CMTY 333, CMTY 394, CMTY 350, CMTY 367, CMTY 369, CMTY 464, CMTY 454 or CMTY 363, CMTY 493, CMTY 494, GEOG 315. Select one: GERO 435 or GERO 411; Select one: CMTY 470 or CMTY 475.

Electives

15 Credits: CMTY 422, CMTY 452, CMTY 455, GEOG 493, POL 487. Select one from the following (3 credits): CMST 341, CMTY 410, CMTY 466, CMTY 470 or CMTY 475 (whichever was not taken as part of the Core), ENGL 332, ETHS 313, GEOG 270, GEOG 471, GERO 405, HIST 447, WS 405.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMTY 350 with a grade of C or better.

Program Student Learning Outcomes

- Fully comprehend the basic physical, social, and economic characteristics of urban, suburban, and rural communities, together with the key problems and issues facing these communities and strategies used by Community Development and Planning professionals to address these issues.
- Basic interpersonal communication, oral and written communication, research, analytical, and teamwork skills to become a successful Community Development professional.

BA - Planning and Community Development - Economic Development Planning *(60 credits)*

Admission Requirements

- GPA: 2.55
- Completion of at least 12 semester credits overall, 9 of which must be from SCSU.

Notes

- This program is not accepting new students.

Program Requirements

CMTY 200, CMTY 333, CMTY 394, CMTY 350, CMTY 367, CMTY 369, CMTY 464, CMTY 454 or CMTY 363,

CMTY 493, CMTY 494, GEOG 315. Select one: GERO 435 or GERO 411; Select one: CMTY 470 or CMTY 475.

Electives
12 Credits: CMTY 363, CMTY 422, CMTY 450, ECON 365. Select two courses (6 credits): CMTY 410, CMTY 452, CMTY 455, CMTY 466. ECON 465, FIRE 378, GEOG 271, GEOG 385, GEOG 396, GEOG 457, GEOG 497, HIST 447.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMTY 350 with a grade of C or better.

Program Student Learning Outcomes

- Fully comprehend the basic physical, social, and economic characteristics of urban, suburban, and rural communities, together with the key problems and issues facing these communities and strategies used by Community Development and Planning professionals to address these issues.
- Basic interpersonal communication, oral and written communication, research, analytical, and teamwork skills to become a successful Community Development professional.

BA - Planning and Community Development - Environmental Planning *(60 credits)*

Admission Requirements

- GPA: 2.55
- Completion of at least 12 semester credits overall, 9 of which must be from SCSU.

Notes

- This program is not accepting new students.

Program Requirements
CMTY 200, CMTY 333, CMTY 394, CMTY 350, CMTY 367, CMTY 369, CMTY 464, CMTY 454 or CMTY 363, CMTY 493, CMTY 494, GEOG 315. Select one: GERO 435 or GERO 411; Select one: CMTY 470 or CMTY 475.

Electives
12 Credits: CMTY 422, CMTY 450 or CMTY 451, CMTY 452, GEOG 492. Select two courses from the following (6 credits): CMST 341, CMTY 410, CMTY 428, CMTY 455, CMTY 466, ECON 351, ENGL 332, ETS 363, ETS 367, ETS 468, GEOG 303, GEOG 372, PSY 323.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMTY 350 with a grade of C or better.

Program Student Learning Outcomes

- Fully comprehend the basic physical, social, and economic characteristics of urban, suburban, and rural communities, together with the key problems and issues facing these communities and strategies used by Community Development and Planning professionals to address these issues.
- Basic interpersonal communication, oral and written communication, research, analytical, and teamwork skills to become a successful Community Development professional.

BA - Planning and Community Development - Planning & GIS *(60 credits)*

Admission Requirements

- GPA: 2.55
- Completion of at least 12 semester credits overall, 9 of which must be from SCSU.

Notes

- This program is not accepting new students.

Program Requirements
CMTY 200, CMTY 333, CMTY 394, CMTY 350, CMTY 367, CMTY 369, CMTY 464, CMTY 454 or CMTY 363, CMTY 493, CMTY 494, GEOG 315. Select one: GERO 435 or GERO 411; Select one: CMTY 470 or CMTY 475.

Electives
18 Credits: CMTY 422, CMTY 451 or CMTY 452, GEOG 316, GEOG 406, GEOG 416, GEOG 462.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMTY 350 with a grade of C or better.

Program Student Learning Outcomes

- Fully comprehend the basic physical, social, and economic characteristics of urban, suburban, and rural communities, together with the key problems and issues facing these communities and strategies used by Community Development and Planning professionals to address these issues.
- Basic interpersonal communication, oral and written communication, research, analytical, and teamwork skills to become a successful Community Development professional.

BA - Planning and Community Development - Public Planning *(60 credits)*

Admission Requirements

- GPA: 2.55
- Completion of at least 12 semester credits overall, 9 of which must be from SCSU.

Notes

- This program is not accepting new students.

Program Requirements
CMTY 200, CMTY 333, CMTY 394, CMTY 350, CMTY 367, CMTY 369, CMTY 464, CMTY 454 or CMTY 363, CMTY 493, CMTY 494, GEOG 315. Select one: GERO 435 or GERO 411; Select one: CMTY 470 or CMTY 475.

Electives
12 Credits: CMTY 363, CMTY 422, CMTY 450 or CMTY 451, CMTY 452. Select two courses from the following (6 credits): CMTY 410, CMTY 455, CMTY 466, ECON 461, GEOG 457, HIST 447, POL 312, POL 313, POL 380, POL 481, POL 483, POl 484, POL 489.

Students fulfill the University's Upper Division Writing Requirement by successfully completing CMTY 350 with a grade of C or better.

Program Student Learning Outcomes

- Fully comprehend the basic physical, social, and economic characteristics of urban, suburban, and rural communities, together with the key problems and issues facing these communities and strategies used by Community Development and Planning professionals to address these issues.
- Basic interpersonal communication, oral and written communication, research, analytical, and teamwork skills to become a successful Community Development professional.

Minor - Planning and Community Development *(18 credits)*

- Admission RequirementsAdmitted to a major

Program Requirements
18 credits: CMTY 350, CMTY 363, CMTY 367, CMTY 422, CMTY 450, CMTY 464

Certificate - Planning and Community Development *(18 credits)*

Admission Requirements

- GPA: 2.5
- In case of current students: Accepted in a current major
- In the case of professionals looking for credentialing either an earned AA degree, BA or BS, or professional experience in public administration or a related field.

Program Requirements
(18 credits) CMTY 367, CMTY 369, CMTY 394, CMTY 422, CMTY 450, CMTY 464

Minor - Heritage Preservation *(24 credits)*

Program Requirements
CMTY 200 or CMTY 410; CMTY 350, CMTY 394, CMTY 450, CMTY 451; CMTY 464 or CMTY 367. 6 credits: Select two courses from the following: CMTY 333, CMTY 455, GEOG 270, GEOG 457, HIST 447. Note: Up to 6 credits can be double-counted with another major or minor.

Planning and Community Development Graduate Certificate

Geography and Planning
Chairperson: David Wall
Address: 359 Stewart Hall
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Website: www.stcloudstate.edu/gp

Certificate - Planning and Community Development *(18 credits)*

Admission Requirements

- GPA: 2.8
- BA or BS in a related field.

Program Requirements
(18 credits) CMTY 522, CMTY 550 or CMTY 551, CMTY 554, CMTY 552, CMTY 564, CMTY 566

Social Studies: Geography (Education BS)

Geography and Planning
Chairperson: David Wall
Address: 359 Stewart Hall
Phone: 320.308.3160
Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp

BS - Social Studies: Geography *(68 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Students in the Geography Concentration are not required to take GEOG 253 in their Social Studies Licensing Core.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements
Social Studies Licensing Core (44 credits): ANTH 250; ECON 201; GEOG 253, GEOG 270; HIST 140 or HIST 141, HIST 106 (global only), HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SOC 160; SST 253, SST 441, SST 453. Geography Core (15 credits): GEOG 111, GEOG 270, GEOG 271, GEOG 272 and GEOG 376.

Electives
9 credits of electives selected from: GEOG 368, GEOG 369, GEOG 372, GEOG 373, GEOG 374, GEOG 384, GEOG 471 or GEOG 486. GEOG 410 may be substituted with approval of advisor.

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.

- Students will develop student assessment materials appropriate for various age groups and content areas.

Hospitality and Tourism BA and Minor

Geography and Planning

Chairperson: David Wall
Address: 359 Stewart Hall
Phone: 320.308.3160
Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp

BA - Hospitality and Tourism *(57 credits)*

- Admission RequirementsCompletion of HTSM 111 Introduction to Hospitality and Tourism with a "C" grade or better

Notes

- All of the following must be completed with a "C" grade or better: HTSM 111, HTSM 215, HTSM 415, HTSM 425, HTSM 434.
- Students choose either Hospitality Emphasis or Tourism Development Emphasis, and then all students take courses from the Regional Electives.

Program Requirements
36 credits: Program Core (15 credits): HTSM 111, HTSM 215, HTSM 415, HTSM 425, HTSM 434. Cognate Requirement (15 credits): ACCT 291, BLAW 235, MGMT 201, CNA 169 or CSCI 169, MKTG 220 or HTSM 395. Practical Field Experience (6 credits): HTSM 444.

Electives
21 credits: Student selects either HOSPITALITY Emphasis (15 credits): HTSM 294, HTSM 297, HTSM 360, HTSM 362, HTSM 364, HTSM 368, HTSM 370, HTSM 372, or HTSM 498; or TOURISM DEVELOPMENT Emphasis (15 credits): HTSM 396, HTSM 496, HTSM 497, HTSM 498, GEOG 393, CMTY 350, CMTY 464, or CMTY 455. And all students choose REGIONAL Electives (6 credits): GEOG 368, GEOG 369, GEOG 373, GEOG 374, GEOG 376, GEOG 378, GEOG 384, or GEOG 410.

To satisfy the UDWR students in the Hospitality and Tourism major will need to complete HTSM 434 Hospitality and Tourism Seminar with a grade of "C" or better.

Program Student Learning Outcomes

- Expand understanding of hospitality and tourism, the industries and organizations that support it, and the global impacts hospitality/tourism has on people, places and cultures
- Understand the interconnectedness of place and the linkages (political, transportation, cultural) between tourist generation regions and destinations.
- Value geographic diversity (physical, cultural, and economic) as a catalyst for tourism, and recognize the importance of conservation in protecting these resources.
- Demonstrate interpersonal communication, both oral and written, research, analytical and leadership skills in preparation for success as a hospitality and tourism professional.

Minor - Hospitality and Tourism *(24 credits)*

- Admission RequirementsA student must pass HTSM 111 and HTSM 215 with a grade of "C" or better to be admitted into the minor.

Notes

- Only courses with a grade of "C" or better will count toward the minor.

Program Requirements
12 credits: HTSM 111, HTSM 215, HTSM 294, HTSM 415

Electives
12 credits selected from the following: HTSM 297, HTSM 360, HTSM 392, HTSM 364, HTSM 368, HTSM 370, HTSM 372, HTSM 396, HTSM 496, HTSM 497; GEOG 393

Gerontology

MS and Certificate

Gerontology

Director: Rona Karasik
Graduate Coordinator: Phyllis Greenberg
Address: 312 Brown Hall
Phone: 320.308.3156
Email: gerontology@stcloudstate.edu
Website: www.stcloudstate.edu/gerontology

MS - Gerontology *(36 credits)*

Admission Requirements

- GPA: 2.75
- GRE is not required.

Notes

- All plans require a minimum of 3 credits of internship, (GERO 644).
- A grade of B- or lower in GERO 620 and GERO 630 will not be accepted in the MS program.

Plan A
Option(s): Thesis
Credits: 36
Core: Plan A (Thesis): 9 credits. GERO 620, GERO 630, GERO 644. A student completing the Plan A option must pass a final oral examination on the thesis submitted to the student's final evaluation committee.
Electives: (15 credit minimum). Select from the following with permission from the graduate adviser: GERO 505, GERO 511, GERO 515, GERO 525, GERO 530, GERO 535, GERO 505, GERO 511, GERO 515, GERO 540, GERO 565, GERO 570; PSY 647; SOC 650.
Research: (12 credits) GERO 699 (6 credits taken in 3 credit increments); GERO 650; CEEP 678.

Plan B
Option(s): Starred Paper(s) | Comprehensive Exam | Capstone
Credits: 36
Core: Plan B1 Starred Paper: 9 credits. GERO 620, GERO 630, GERO 644. A student completing the Plan B1 Starred Paper Option must pass a final oral examination on the starred paper submitted to the student's final evaluation committee. Plan B2 Comprehensive Exam: 10 credit minimum. GERO 620, GERO 630, GERO 644 (minimum of 4 credits). A student completing the Plan B2 Comprehensive Exam Option must pass comprehensive examination with a minimum score of 80%.
Electives: Plan B1 Starred Paper: 18 credit minimum. Select from the following with permission of graduate advisor: GERO 505, GERO 511, GERO 515, GERO 525, GERO 530, GERO 535, GERO 540, GERO 565, GERO 570; PSY 647; SOC 650. Plan B2 Comprehensive Exam: 21 credit minimum. Select from the following with permission of graduate advisor: GERO 505, GERO 511, GERO 515, GERO 525, GERO 530, GERO 535, GERO 540, GERO 565, GERO 570; PSY 647; SOC 650. Capstone: 21 credit minimum Select from the following with permission of graduate advisor: GERO 505, GERO 511, GERO 515, GERO 525, GERO 530, GERO 535, GERO 540, GERO 565, GERO 570; PSY 647; SOC 650
Research: Plan B1 Starred Paper: 9 credits GERO 697 (6 credits in 3 credit increments), GERO 650. Plan B2 Comprehensive Exam: 6 credits: GERO 650, GERO 695.

Program Student Learning Outcomes

- To understand the aging process (specialized knowledge): understand the interdisciplinary nature of human aging, know demographic changes, understand diversity in later life, know disciplinary perspectives on aging (social, physiological, biological, and psychological).
- To know gerontological theory: understand the various models and theories in gerontology, understand the practical implications of theories and gerontology, evaluate gerontological research and theory.
- Experience professional life (career preparation): understand professional methods and ethics, understand professional opportunities in gerontology.
- Know about ethics in gerontology: understand the ethical questions of practice, research, advocacy, and policy, understand proper professional conduct.
- Graduate students will demonstrate and apply research in aging, including: critical analysis of gerontological literature; research methods; research question development; processes of conducting, analyzing & recording research findings.

Certificate - Gerontology *(18-21 credits)*

Admission Requirements

- GPA: 2.75
- Must have a bachelor's degree
- GRE is not required.

Notes

- A grade of B- or lower in GERO 620 and GERO 630 will not be accepted in the certificate program.

Program Requirements
Total of 18-21 graduate level credits: Required Courses, 6 credits: GERO 620; GERO 630. Select 12-15 credits from the following with permission of graduate advisor: GERO 505; GERO 511; GERO 515; GERO 525; GERO 530; GERO 535; GERO 540; GERO 565; GERO 570; GERO 644; GERO 650.

Minor

Gerontology

Director: Rona Karasik
Graduate Coordinator: Phyllis Greenberg
Address: 312 Brown Hall
Phone: 320.308.5224
Email: gerontology@stcloudstate.edu
Website: www.stcloudstate.edu/gerontology

Minor - Gerontology Plan A *(24 credits)*

Program Requirements
GERO 208, GERO 411, GERO 425, GERO 444, GERO 465

Electives
9 credits minimum: GERO 405, GERO 415, GERO 430, GERO 435, GERO 440*, GERO 470, PSY 345, PSY 443, SOC 350. *May be repeated with different topics. Other suitable electives may be used with approval of Gerontology Minor Advisor.

Program Student Learning Outcomes

- Demonstrate an understanding of the aging processes, including: The interdisciplinary nature of human aging; Demographic changes; and Diversity in later life.
- Demonstrate a knowledge of gerontological theory, including: The various models and theories in gerontology; The practical implications of theories in gerontology; and Ways of evaluating gerontological research and theory.
- Experience professional life and prepare for a career in aging, including: Awareness of professional opportunities in gerontology; and Understanding professional methods and ethics.
- Demonstrate an understanding of ethics in gerontology, including: Ethical questions of practice, research, advocacy, and policy; and Proper professional conduct, complexities of working with a diverse population.

Minor - Gerontology Plan B (Nursing Students Only) *(24-25 credits)*

Program Requirements
GERO 208, GERO 411, GERO 425, NURS 306, NURS 307.

Electives
11-12 Credits: GERO 405, GERO 415, GERO 430, GERO 435, GERO 440*, GERO 465, GERO 470, PSY 345. *May be repeated with different topics. Other suitable electives may be used with approval of Gerontology Minor Advisor.

Program Student Learning Outcomes

- Demonstrate an understanding of the aging processes, including: The interdisciplinary nature of human aging; Demographic changes; and Diversity in later life.
- Demonstrate a knowledge of gerontological theory, including: The various models and theories in gerontology; The practical implications of theories in gerontology; and Ways of evaluating gerontological research and theory.
- Experience professional life and prepare for a career in aging, including: Awareness of professional opportunities in gerontology; and Understanding professional methods and ethics.
- Demonstrate an understanding of ethics in gerontology, including: Ethical questions of practice, research, advocacy, and policy; Proper

professional conduct; and Complexities of working with a diverse population.

Minor - Gerontology-BES *(24 credits)*

Program Requirements

Completion of 24 credits with approval of gerontology advisor.

Global Business

BS and Minor

Global Business

Contact: Diane Tourand
Address: 439 Centennial Hall
Phone: 320.308.3225
Email: management@stcloudstate.edu
Website:http://www.stcloudstate.edu/management/
Faculty: Paula Weber

BS - Management - Global Business Concentration *(79 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.
- The Global Business concentration requires certification of a threshold level of competence in one foreign language. This level can be attained by satisfactorily completing one year of 200-level sequence of courses or by passing an examination administered through the Languages and Cultures Department, which will provide a certificate of competence to the Office of Records and Registration prior to graduation.

Program Requirements

Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341. Management Major-Global Business Concentration required courses (24 credits): MGMT 352, MGMT 365, MGMT 467, MGMT 470, MKTG 416, FIRE 473, ECON 474, and either HBS 410 or HBS 479 or other credit bearing international experience as approved by advisor.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing MGMT 467.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.

- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. International business majors will examine the determination and effects of exchange rates on international trade and financial flows; examine and evaluate the risks of foreign investment, foreign exchange exposures, and interest rate risk - international business majors will evaluate the use of hedging tools to manage the risks; examine the impact of culture on consumer behavior and marketing practices; compare and contrast management practices across cultures and countries; and will examine the history, politics, geography, and sociology of a region of the world.

Minor - Global Business *(15 credits)*

Admission Requirements

- GPA: 2.65
  Admitted to a major

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
MKTG 416, ECON 474, FIRE 473, MGMT 470, and either HBS 410 or HBS 479 or other credit bearing international experience as approved by advisor.

Minor - Global Business Minor for Non-Business Majors *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only students admitted to a major and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
ACCT 291, MGMT 201, BLAW 235, MKTG 220, FIRE 371

Electives
Three (3) 300-400 electives selected from the following list: MGMT 470, BLAW 437, MKTG 416, ECON 474 or FIRE 473, HBS 410 or HBS 479 or other credit bearing international experience as approved by advisor.

Global Studies

BA and Minor

Global Studies

Chairperson: Mikhail Blinnikov
Chairperson Address: 344 Stewart Hall
Program Address: A216 Education Building
Phone: 320.308.4908
Website: www.stcloudstate.edu/globalstudies

BA - Global Studies *(54 credits)*

- Admission RequirementsCompletion of ENGL 191, CMST 192, and GLST 195 and student must submit a transcript or course summary.

Program Requirements
ANTH 250, ECON 350, HIST 106 (global), GLST 195, GLST 495, POL 353, ENGL 191, CMST 192. The capstone course for this major is GLST 495 and should be taken during the senior year.

Electives
Completion of 36 credits with advisor's approval.

Program Student Learning Outcomes

- The student critically analyzes international and global issues.
- The student understands the different disciplinary perspectives on international and global matters.
- The student understands international and global issues.
- The student evaluates international and global issues.
- The student analyzes information on international and global issues.
- The student communicates orally and in writing about specific international and global issues.
- The student appreciates the impact of global phenomena from a variety of disciplinary perspectives.
- The student acquires an increased appreciation of diverse social, cultural, political, and economic systems.

Minor - Global Studies *(24 credits)*

- Admission RequirementsStudents must take GLST 195 and one additional course counting in the minor before being admitted to the minor.

Notes

- Students participating in a study abroad program can apply all relevant courses with the permission of the GLST advisor.

Program Requirements
ANTH 250, ECON 350, HIST 106 (Global), GLST 195, GLST 495, POL 353.

Electives
Completion of 6 credits with advisor's approval.

Program Student Learning Outcomes

- The student critically analyzes international and global issues.
- The student understands the different disciplinary perspectives on international and global matters.
- The student understands international and global issues.
- The student evaluates international and global issues.
- The student analyzes information on international and global issues.
- The student communicates orally and in writing about specific international and global issues.
- The student appreciates the impact of global phenomena from a variety of disciplinary perspectives.
- The student acquires an increased appreciation of diverse social, cultural, political, and economic systems.

History

History (Minors)

History
Chairperson: Robert Galler
Address: 283 Stewart Hall
Phone: 320.308.3165
Email: history@stcloudstate.edu
Website: www.stcloudstate.edu/history

Minor - African Studies (BA, BS) *(27 credits)*
Program Requirements
AFST 250, ENGL 307, HIST 370, 371

Electives
12 credits selected from the following when the focus is Africa: HIST 486-586, ECON 480-580, ENV 320, SST 470-570, CJS 325, AFST 370.

Program Student Learning Outcomes

- To get an overall inter-disciplinary knowledge about African culture, economy and politics in the context of historical developments that have occurred from the earliest times to the present.
- Become equipped with analytical and critical tools that help them to dispel the usual misconceptions made about Africa and understand Africa's contribution to world history.
- To understand historical and cultural links between Africa and the USA as a result

of both forced and voluntary African migration to this country.
- And as part of the liberal arts-based inter-department program the African Studies minor is intended to prepare students who pursue careers in international business, international relations, economic development, human rights advocacy, education, law, working with international agencies, preparing for careers int he USA government, etc.

Minor - African Studies-BES *(27 credits)*

Program Requirements

Students may Select from courses with substantial African content in consultation with the director.

Program Student Learning Outcomes

- To get an overall inter-disciplinary knowledge about African culture, economy and politics in the context of historical developments that have occurred from the earliest times to the present.
- Become equipped with analytical and critical tools that help them to dispel the usual misconceptions made about Africa and understand Africa's contribution to world history.
- To understand historical and cultural links between Africa and the USA as a result of both forced and voluntary African migration to this country.
- And as part of the liberal arts-based inter-department program the African Studies minor is intended to prepare students who pursue careers in international business, international relations, economic development, human rights advocacy, education, law, working with international agencies, preparing for careers int he USA government, etc.

Minor - East Asian Studies (BA, BS) *(24 credits)*

Notes

- Students are encouraged to take an East Asian language.

Program Requirements

EAST 363 and EAST 364.

Electives

12 credits: select at least 2 fields: ECON 480; GEOG 369; HIST 365, HIST 369, HIST 467; POL 336; REL 250; SST 470 (Area Studies-Japan or China); JPN 101, JPN 102, JPN 201, JPN 202.

Minor - East Asian Studies-BES *(27 credits)*

Program Requirements

Completion of 27 credits with the approval of the director.

BA and Minor

History

Chairperson: Robert Galler
Address: 283 Stewart Hall
Phone: 320.308.3165
Email: history@stcloudstate.edu
Website: www.stcloudstate.edu/history

BA - History *(42 credits)*

- Admission RequirementsStudents are required to take either a minimum of one year in a foreign language or a minor outside of history.

Program Requirements

21 Credits: HIST 291, HIST 391, HIST 491. Choose two courses from: HIST 109, HIST 140, HIST 141; Choose two courses from: HIST 106, HIST 110, HIST 111.

Electives

21 credits of HIST courses. No more than 1 course at the 100- or 200-level. Choose at least 1 course focused outside the U.S. and Europe: HIST 361, HIST 362, HIST 365, HIST 369, HIST 370, HIST 371, HIST 402, HIST 467, HIST 486, or other course by advisor permission.

Students fulfill the University's Upper Division Writing Requirement by successfully completing HIST 491.

Program Student Learning Outcomes

- Knowledge of content in American, European, and non-Western History.
- Knowledge of the interpretative and multi-disciplinary nature of history.

- Ability to think critically.
- Ability to do historical research.
- Ability to communicate in writing and verbally.
- Awareness of and appreciation for cultural difference.

Minor - History *(24 credits)*

Program Requirements

12 Credits: HIST 291, HIST 391. Choose one course from: HIST 109, HIST 140, HIST 141; Choose one course from: HIST 106, HIST 110, HIST 111.

Electives

12 credits of HIST courses. At least 3 courses must be from the 300- or 400-level.

Program Student Learning Outcomes

- Knowledge of content in American, European, and non-Western History.
- Knowledge of the interpretative and multi-disciplinary nature of history.
- Ability to think critically.
- Ability to do historical research.
- Ability to communicate in writing and verbally.
- Awareness of and appreciation for cultural difference.

History: Education BS and Minor

History

Chairperson: Robert Galler
Address: 283 Stewart Hall
Phone: 320.308.3165
Email: history@stcloudstate.edu
Website: www.stcloudstate.edu/history

BS - Social Studies: History *(24 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the concentrations in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements

Social Studies Licensing Core: ANTH 250; ECON 201; GEOG 253, GEOG 270; HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SOC 160; SST 253, SST 453;
History Core: HIST 140, HIST 141, HIST 210, HIST 211.
3 credits from the following: HIST 361, HIST 362, HIST 365, HIST 369, HIST 370, HIST 371, HIST 402, HIST 467, HIST 486.

Electives

9 credits of 300-400 level History courses, excluding HIST 385, HIST 444, HIST 490, and HIST 491.

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.

- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

Minor - History - Elementary Education *(18 credits)*

- Admission RequirementsHIST 101, HIST 105 and HIST 106 courses cannot be used to fulfill requirements for the history major and minor in B.A. and B.S. programs.

Notes

- This program does not lead to teacher licensure but supplements other programs that lead to licensure.

Program Requirements
HIST 140, HIST 141, HIST 210, HIST 211. Complete 6 credits from: HIST 361, HIST 362, HIST 365, HIST 369, HIST 370, HIST 371, HIST 402, HIST 467, HIST 486.

Program Student Learning Outcomes

- Knowledge of content in American, European, and non-Western History.
- Knowledge of the interpretative and multi-disciplinary nature of history.
- Ability to think critically.
- Ability to do historical research.
- Ability to communicate in writing and verbally.
- Awareness of and appreciation for cultural difference.

Elementary Education Cognate
A student will select one course from each of the three groups: a. US: HIST 140, HIST 141 (3); b. Western Civ I and II: HIST 210, HIST 211 (3); c. Africa, Asia, Latin America or Middle East (3).

MA and MS

History

Chairperson: Robert Galler
Address: 283 Stewart Hall
Phone: 320.308.3165
Email: history@stcloudstate.edu
Website: www.stcloudstate.edu/history

MA - History *(36 credits)*
Admission Requirements

- GPA: 2.8
- The GRE is required.
- Successful completion of a minimum of 16 credits in history beyond undergraduate general education requirements.
- Submission of a statement of intent, not to exceed 500 words, outlining the person's historical interests, experience, and professional goals.
- Submission of a writing sample, not to exceed 30 double-spaced pages.

Notes

- An applicant who has at least a 3.0 GPA in undergraduate courses in history and a 2.8 GPA overall may be admitted without conditions. An applicant may be considered for conditional admissions if his/her GPA in history courses was between 2.6 and 2.99, and he/she had at least a 2.6 GPA in the last two years of the undergraduate program.
- An applicant with serious gap(s) in his/her history background may be required to take additional undergraduate courses before admission is granted. In some cases, the applicant may be required to complete additional undergraduate work even though a major or minor may have been completed.
- Reading knowledge of a foreign language is not required but strongly recommended.

Plan A
Option(s): Thesis
Credits: 36
Core: 6 credits. HIST 610 and one of the following: HIST 664, HIST 667, or HIST 681.
Electives: 21-24 credits in history course work (12 credits of the electives must be 600 level, in-class

reading or seminar courses). May include: Any 500 or 600 level course in history; Cognate courses: 3-6 credits in 500-600 level courses approved by advisor.
Research: 6 credits of HIST 699.

Program Student Learning Outcomes

- Knowledge of content in American, European, and non-Western History.
- Knowledge of the interpretative and multi-disciplinary nature of history.
- Ability to think critically.
- Ability to do historical research.
- Ability to communicate in writing and verbally.
- Awareness of and appreciation for cultural difference.

MA - History - Public History *(36 credits)*

Admission Requirements

- GPA: 3.0
- The GRE is required.
- Major in history (or its equivalence) at the undergraduate level of at least 32 credits.
- Submission of a statement of intent, not to exceed 500 words, outlining the person's historical interests, experience, and professional goals.
- Submission of a writing sample, not to exceed 30 double-spaced pages.

Notes

- A grade point average of 3.0 or higher overall and 3.25 or higher in the major.
- Candidates should have completed a survey in United States history and should have taken at least nine credits in advanced American history courses. Applicants also should have earned nine credits or more in advanced non-United States history courses. Additional classes in such fields as American government, geography, community studies, and anthropology would strengthen the application, as would work experience in public history.

Plan A
Option(s): Thesis
Credits: 36
Core: 15 credits. HIST 610, HIST 672, HIST 673, HIST 696 (6 credits).
Electives: 15 credits. HIST 674 or HIST 675 or HIST 676 (3 Cr.); HIST 664 or HIST 667 or HIST 681 (3 Cr.); HIST 600-level (3 Cr.); HIST 500-600 level (3-9 Cr.). Cognate courses: (0-6 credits) in HIST 500-600 level courses with approval of Director of Public History.
Research: HIST 699 (6 Cr.)

MS - History *(36 credits)*

- Admission RequirementsThe GRE is required.
- A baccalaureate degree in a teacher education program from an accredited teacher preparation institution and completion of at least an undergraduate minor in history.
- Submission of a statement of intent, not to exceed 500 words, outlining the person's historical interests, experience, and professional goals.
- Submission of a writing sample, not to exceed 30 double-spaced pages.

Notes

- A student completing a master of science program will be required to take a written comprehensive examination as a final evaluation.
- Some courses in this track may be waived if the student has fulfilled these requirements as part of an undergraduate program.

Program Requirements
Comprehensive Exam Core: 6 credits. HIST 610 and one of the following: HIST 664, HIST 667, or HIST 681

Electives
30 credits. 6 credits of the electives must be 600 level, in-class reading or seminar courses. May include: Any 500 or 600 level course in history.

Program Student Learning Outcomes

- Knowledge of content in American, European, and non-Western History.

- Knowledge of the interpretative and multi-disciplinary nature of history.
- Ability to think critically.
- Ability to do historical research.
- Ability to communicate in writing and verbally.
- Awareness of and appreciation for cultural difference.

Human Relations and Multicultural Education

Minor

Human Relations and Multicultural Education

Chairperson: Semya Hakim
Address: B118 Education Building
Phone: 320.308.3124
Email: hurl@stcloudstate.edu
Website: www.stcloudstate.edu/hurl

Minor - Human Relations *(23 credits)*

Notes

- The 23 credit minor provides an option for those desiring a more extensive study.
- HURL 491 and HURL 492 should be taken near the end of the program.
- Minor is available to individuals in all degree programs.

Program Requirements

HURL 201, HURL 206, HURL 303, HURL 491, HURL 492. Up to 6 credits of HURL 402 and 6 credits of internship may be counted toward the minor.

Electives

Choice of 12 interdisciplinary elective credits (see the HURL website for a list of electives). New courses may be added with the approval of the HURL advisor.

Program Student Learning Outcomes

- Students will demonstrate an in-depth and working knowledge of: economic globalization impacts on the environment; local economies; workers; women's rights; social conflict; food; local resources---water, land, trees, etc.; and rise of the corporation.

Minor - Human Relations *(17 credits)*

Notes

- The 17 credit minor is designed as a short or second minor.
- HURL 491 and HURL 492 should be taken near the end of the program.
- Minor is available to individuals in all degree programs.

Program Requirements

HURL 201, HURL 206, HURL 303, HURL 491, HURL 492. Up to 3 credits of internship may be counted toward the minor.

Electives

Choice of 6 interdisciplinary elective credits (see the HURL website for a list of electives). New courses may be added with the approval of the HURL advisor.

Program Student Learning Outcomes

- Students will demonstrate an in-depth and working knowledge of: economic globalization impacts on the environment; local economies; workers; women's rights; social conflict; food; local resources---water, land, trees, etc.; and rise of the corporation.

Minor - Human Relations-BES *(23 credits)*

Notes

- HURL 491 and HURL 492 should be taken near the end of the program.
- Minor is available to individuals in all degree programs.

Program Requirements

HURL 201, HURL 206, HURL 303, HURL 491, HURL 492. Up to 6 credits of HURL 402 and 6 credits of internship may be counted toward the minor.

Electives

Choice of 12 interdisciplinary elective credits (see the HURL website for a list of electives). New courses

may be added with the approval of the HURL advisor.

Program Student Learning Outcomes

- Students will demonstrate an in-depth and working knowledge of: economic globalization impacts on the environment; local economies; workers; women's rights; social conflict; food; local resources---water, land, trees, etc.; and rise of the corporation

Social Responsibility MS

Human Relations and Multicultural Education

Chairperson: Semya Hakim
Address: B118 Education Building
Phone: 320.308.3124
Email: hurl@stcloudstate.edu
Website: www.stcloudstate.edu/hurl

MS - Social Responsibility *(32-36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.

Plan A
Option(s): Thesis
Credits: 32
Core: Core Courses, 12 credits: HURL 682, SOC 679, SOC 684, SOC 685. Focus and Context Courses select 5 credits. Focus Courses, select 2 credits minimum: HURL 507, HURL 511, HURL 512, HURL 517, HURL 518, HURL 520, WS 505 or ETHS 505, SSCI 576, SOC 568, SOC 573, SOC 582, SOC 650, SOC 630 or WS 630 or HURL 630. Context Courses, 2 credit minimum: HURL 502, HURL 508, HURL 513, HURL 516, HURL 518, HURL 519, HURL 550, SOC 512, SOC 532, SOC 555, SOC 560, SOC 562, SOC 572, SOC 574, SOC 575, SOC 581, SOC 582, SOC 593 or WS 593, SOC 602, SOC 656, SOC 672, SOC 689, WS 515, WS 645, HURL 630 or SOC 630 or WS 630. Professional Development Courses select 6 credits: ANTH 592, HURL 591, HURL 592, HURL 620, HURL 622, HURL 680, HURL 681, SOC 556, SOC 578, SOC 644, SOC 680, WS 506 or HURL 506, WS 545, HURL 630 or SOC 630 or WS 630.
Electives: 3 credits. Select from any of the courses listed above or others with advisor's consent. Students are encouraged to use their elective credits in an internship. SOC 644, HURL 680, HURL 630 or SOC 630 or WS 630 (1-3 credits with advisor permission)
Research: 6 credits select HURL 699 or SOC 699 or WS 699.

Plan B
Option(s): Starred Paper(s)
Credits: 32
Core: Core Courses, 12 credits: HURL 682, SOC 679, SOC 684, SOC 685. Focus and Context Courses select 8 credits. Focus course select 2 credits minimum: HURL 507, HURL 511, HURL 512, HURL 517, HURL 518, HURL 520, WS 505 or ETHS 505, SSCI 576, SOC 568, SOC 573, SOC 582, SOC 650, SOC 630 or WS 630 or HURL 630. Context Courses, 2 credit minimum: HURL 502, HURL 508, HURL 513, HURL 516, HURL 518, HURL 519, HURL 550, SOC 512, SOC 532, SOC 555, SOC 560, SOC 562, SOC 572, SOC 574, SOC 575, SOC 581, SOC 582, SOC 593 or WS 593, SOC 602, SOC 656, SOC 672, SOC 689, WS 515, WS 645, HURL 630 or SOC 630 or WS 630. Professional Development Courses select 6 credits: ANTH 592, HURL 591, HURL 592, HURL 620, HURL 622, HURL 680, HURL 681, SOC 556, SOC 578, SOC 644, SOC 680, WS 506 or HURL 506, WS 545, HURL 630 or SOC 630 or WS 630.
Electives: Select 6 credits from the following or consult with advisor for other options: SOC 644, HURL 680, HURL 630 or SOC 630 or WS 630. Internships are encouraged.
Research: Starred Paper required

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: Core Courses, 12 credits: HURL 682, SOC 679, SOC 684, SOC 685. Focus and Context Courses, select 8 credits. Focus courses select 2 credits minimum: HURL 507, HURL 511, HURL 512, HURL 517, HURL 518, HURL 520, WS 505 or ETHS 505, SSCI 576, SOC 568, SOC 573, SOC 582, SOC 650, SOC 630 or WS 630 or HURL 630. Context courses, 2 credit minimum: HURL 502, HURL 508, HURL 513, HURL 516, HURL 518, HURL 519, HURL 550, SOC 512, SOC 532, SOC 555, SOC 560, SOC 562, SOC 572, SOC 574, SOC 575, SOC 581, SOC 582, SOC 593 or WS 593, SOC 602, SOC 656, SOC 672, SOC 689, WS 515, WS 645, HURL 630 or SOC 630 or WS 630. Professional Development, 6 Credits: ANTH 502, ANTH 592, HURL 591, HURL 592, HURL 620, HURL 622, HURL 680, HURL 681, SOC 556, SOC 578, SOC 644, SOC 680, WS 506 or HURL 506, WS 545, HURL 630 or SOC 630 or WS 630. (3 credits of internship may count as professional development.)

Electives: 10 credits: Select courses in consultation with advisor. Students are encouraged to use their elective credits in an internship: SOC 644, HURL 680, HURL 630 or SOC 630 or WS 630. (1-3 credits with advisor permission).
Research: Project/Portfolio required

Program Student Learning Outcomes

- Demonstrate an in-depth and working knowledge of economic globalization impacts on the environment
- Demonstrate an in-depth and working knowledge of local economies.
- Demonstrate an in-depth and working knowledge of workers.
- Demonstrate an in-depth and working knowledge of women's rights.
- Demonstrate an in-depth and working knowledge of social conflict.
- Demonstrate an in-depth and working knowledge of food.
- Demonstrate an in-depth and working knowledge of local resources - water, land, trees, etc.
- Demonstrate an in-depth and working knowledge of rise of the corporation.

Information Systems

Information Systems BS and Minor

Information Assurance and Information Systems

Chairperson: Susantha Herath
Address: 443 Centennial Hall
Phone: 320.308.2174
Email: is@stcloudstate.edu
Website: www.stcloudstate.edu/is

BS - Information Systems *(91 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses number 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements
Business Core (22 credits): HBS 211, MGMT 201, MKTG 220, FIRE 371, IS 340, MGMT 383, MGMT 497, MKTG 333 or ENGL 332 or CMST 341. IS Major Required Courses (21 credits): IS 250, IS 356, IS 363, IS 443, IS 450, IS 451, IS 460

Electives
(15 Credits) Select 15 credits from the Department's approved elective list.

Students fulfill the University's Upper Division Writing Requirement by successfully completing IS 443.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively

contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. BCIS majors will be able to articulate the roles of information systems in business organizations; analyze a business problem and recommend an information system solution; apply system concepts for framing an understanding problems; model organizational processes and data; and create information systems applications using system analysis and design processes and techniques.

BS - 5 Year BS/MS Track *(30 - 33 credits)*

Admission Requirements

- GPA: 3.10 or higher
- Must have completed the 21 required undergraduate IS core credits.

Notes

- In addition to the undergraduate core, students will complete an 18 credit graduate core, various elective requirements and plan requirements.
- Only SCSU students enrolled in BSIS program are eligible for the 5-year M.S.

Plan A
Option(s): Thesis
Credits: 30
Core: IA 606, IA 612, IA 643, IA 673, IA 681
Electives: Select 9 credits from one of the concentrations with approval of the program director. Information Management Concentration: IA 644, IA 659, IA 680, IA 683, IA 693, IS 559, CNA 574, IS 583, MBA 640. Networking Concentration: IA 644, IA 659, IA 680, CNA 540, CNA 551, CNA 573, CNA 574, CNA 585, CNA 601, CNA 650. Note: Either CNA 585 or CNA 601 (cannot count both in the program).
Research: IA 699

Plan B
Option(s): Starred Paper(s)
Credits: 33
Core: IA 606, IA 612, IA 643, IA 673, IA 681
Electives: Select 9 credits from one of the concentrations with approval of the program director. Information Management Concentration: IA 644, IA 659, IA 680, IA 683, IA 693, IS 559, CNA 574, IS 583, MBA 640. Networking Concentration: IA 644, IA 659, IA 680, CNA 540, CNA 551, CNA 573, CNA 574, CNA 585, CNA 601, CNA 650. Note: Either CNA 585 or CNA 601 (cannot count both in the program).
Research: IA 697

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. BCIS majors will be able to articulate the

roles of information systems in business organizations; analyze a business problem and recommend an information system solution; apply system concepts for framing an understanding problems; model organizational processes and data; and create information systems applications using system analysis and design processes and techniques.

Minor - Information Systems-Business Majors *(15 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior Standing) may enroll in 300 and 400 level courses. IS Department permission required for all other students.

Program Requirements
IS 250 or equivalent, IS 356.

Electives
9 credits of IS electives selected with prior approval of the IS minor advisor.

Minor - Information Systems - Non-Business *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior Standing) may enroll in 300 and 400 level courses. IS Department permission required for all other students.

Program Requirements
IS 250 or equivalent programming course, IS 340, IS 356. 6 credits from ACCT 201, ACCT 291, BLAW 235, FIRE 371, MGMT 301, MKTG 320.

Electives
9 credits of IS electives, selected with prior approval of the IS minor advisor.

Minor - Information Systems-BES *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. IS Department permission required for all other students.

Program Requirements
IS 250 or equivalent programming course, IS 340, IS 356. 6 credits from ACCT 291, BLAW 235, FIRE 371, MGMT 301, MKTG 320.

Electives
9 credits of IS electives, selected with prior approval of the IS minor advisor.

Business Intelligence and Information Assurance Certificate

Information Assurance and Information Systems

Chairperson: Susantha Herath
Address: 443 Centennial Hall
Phone: 320.308.2174
Email: is@stcloudstate.edu
Website: www.stcloudstate.edu/is

Certificate - Business Intelligence *(9 credits)*

Notes

- Must earn a 3.00 average in the program requirements to earn certificate.

Program Requirements
This program provides coursework leading to eligibility for a certificate. IS 443, IS 450, IS 454

Certificate - Information Assurance *(9 credits)*

Admission Requirements

- GPA: 3.0

Notes

- Must earn a 3.00 average in the program requirements to earn certificate.

Program Requirements
This program provides coursework leading to eligibility for a certificate: IS 371, IS 372, IS 483

MS

Information Assurance and Information Systems

Co-Directors: Jim Chen, Jie Meichsner
Address: 443 Centennial Hall
Phone: 320.308.2174
Email: is@stcloudstate.edu
Website: www.stcloudstate.edu/msia

MS - Information Assurance *(30-36 credits)*

Admission Requirements

- GPA: 2.75
- Possess at least an overall 2.75 GPA in your previous undergraduate and graduate records or possess a GPA of at least 2.75 in the last half of your undergraduate work. GRE or GMAT score is not required but recommended.
- A baccalaureate degree in information systems, computer science, computer engineering, computer networking, telecommunication, or related programs is preferred.
- BA/BS degree or higher in any field with two years of work experience in the information system field is also considered.
- Previous undergraduate coursework related to database modeling, network structure/architecture, operating systems theory, statistics, discrete structures and one year of programming. Applicants with deficiencies in any of the above areas may be required to successfully complete one or more courses before receiving full admission to the program.

Plan A
Option(s): Thesis
Credits: 30
Core: IA 606, IA 612, IA 643, IA 673, IA 681
Electives: Select 9 credits from one of the concentrations with approval of the program director. Information Management Concentration: IA 644, IA 659, IA 680, IA 683, IA 693, IS 559, CNA 574, IS 583, MBA 640. Networking Concentration: IA 644, IA 659, IA 680, CNA 540, CNA 551, CNA 573, CNA 574, CNA 585, CNA 601, CNA 650. Note: Either CNA 585 or CNA 601 (cannot count both in the program).
Research: IA 699

Plan B
Option(s): Starred Paper(s)
Credits: 33
Core: IA 606, IA 612, IA 643, IA 673, IA 681
Electives: Select 15 credits from one of the concentrations with approval of the program director. Information Management Concentration: IA 644, IA 659, IA 680, IA 683, IA 693, IS 559, CNA 574, IS 583, MBA 640. Networking Concentration: CNA 540, CNA 551, CNA 573, CNA 574, CNA 585, CNA 601, CNA 650. Note: Either CNA 585 or CNA 601 (cannot count both in the program).
Research: IA 697

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: IA 606, IA 612, IA 643, IA 673, IA 681
Electives: Select 18 credits from one of the concentrations with approval of the program director. Information Management Concentration: IA 644, IA 659, IA 680, IA 683, IA 693, IS 559, CNA 574, IS 583, MBA 640. Networking Concentration: IA 644, IA 659, IA 680, IA 683, IA 693, CNA 540, CNA 551, CNA 573, CNA 574, CNA 585, CNA 601, CNA 650. Note: Either CNA 585 or CNA 601 (cannot count

both in the program).
Research: 3 Cr. IA 680 or CNA 650

Program Student Learning Outcomes

- Students will be able to synthesize IA solutions and security policies for business enterprises, organizations and Homeland security.
- Students will be able to select and apply hardware and software tools to implement IA solutions and security policies.
- Students will be able to assess feasibility, and effectiveness of IA solutions and security policies.
- Students will be able to apply forensic techniques to prevent, detect and reconstruct security violations.
- Students will be able to present technical information and analysis in both oral and written forms.
- Students will be able to articulate ethical standards.

BS - 5 Year BS/MS Track *(30 - 33 credits)*

Admission Requirements

- GPA: 3.10 or higher
- Must have completed the 21 required undergraduate IS core credits.

Notes

- In addition to the undergraduate core, students will complete an 18 credit graduate core, various elective requirements and plan requirements.
- Only SCSU students enrolled in BSIS program are eligible for the 5-year M.S.

Plan A
Option(s): Thesis
Credits: 30
Core: IA 606, IA 612, IA 643, IA 673, IA 681
Electives: Select 9 credits from one of the concentrations with approval of the program director. Information Management Concentration: IA 644, IA 659, IA 680, IA 683, IA 693, IS 559, CNA 574, IS 583, MBA 640. Networking Concentration: IA 644, IA 659, IA 680, CNA 540, CNA 551, CNA 573, CNA 574, CNA 585, CNA 601, CNA 650. Note: Either CNA 585 or CNA 601 (cannot count both in the program).
Research: IA 699

Plan B
Option(s): Starred Paper(s)
Credits: 33
Core: IA 606, IA 612, IA 643, IA 673, IA 681
Electives: Select 9 credits from one of the concentrations with approval of the program director. Information Management Concentration: IA 644, IA 659, IA 680, IA 683, IA 693, IS 559, CNA 574, IS 583, MBA 640. Networking Concentration: IA 644, IA 659, IA 680, CNA 540, CNA 551, CNA 573, CNA 574, CNA 585, CNA 601, CNA 650. Note: Either CNA 585 or CNA 601 (cannot count both in the program).
Research: IA 697

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. BCIS majors will be able to articulate the roles of information systems in business

organizations; analyze a business problem and recommend an information system solution; apply system concepts for framing an understanding problems; model organizational processes and data; and create information systems applications using system analysis and design processes and techniques.

Information Media

Certificate

Information Media

Chairperson: Jennifer Jay
Address: A132 Education Building
Phone: 320.308.2062
Email: im@stcloudstate.edu
Website: www.stcloudstate.edu/im

Certificate - Instructional Technology *(11-12 credits)*

Program Requirements
IM 260, IM 404, IM 455

Electives
IM 421 or IM 422 or IM 423 or IM 456 or IM 462

Program Student Learning Outcomes

- Candidates demonstrate the knowledge, skills, and dispositions to design conditions for learning by applying principles, theories, and research associated with instructional systems design, message design, instructional strategies, and learner characteristics.
- Candidates demonstrate the knowledge, skills, and dispositions to develop instructional materials and experiences by applying principles, theories, and research related to print, audiovisual, computer-based, and integrated technologies.
- Candidates demonstrate the knowledge, skills, and dispositions to use processes and resources for learning by applying principles, theories, and research related to media utilization, diffusion, implementations, and policy-making.
- Candidates demonstrate knowledge, skills, and dispositions to evaluate the adequacy of instruction and learning by applying principles, theories, and research related to problem analysis, criterion-referenced measurement, formative and summative evaluation, and long-range planning.

Certificates and Graduate Tracks leading to Licensure

Information Media

Chairperson: Jennifer Jay
Address: A132 Education Building
Phone: 320.308.2062
Email: im@stcloudstate.edu
Website: www.stcloudstate.edu/im

Certificate - Design for E-Learning *(15 credits)*

Admission Requirements

- GPA: 2.75
- A baccalaureate degree from an accredited institution is required

Program Requirements
12 credits: IM 504, IM 554, IM 555, IM 556.

Electives
3 credits: IM 633 or IM 646 or IM 656

Plan A
Option(s):
Credits: 12
Core:
Electives:
Research:

Program Student Learning Outcomes

- DESIGN design conditions for learning by applying principles of instructional systems design, message design, instructional strategies, and learner characteristics.
- DEVELOPMENT select or develop instructional materials and experiences using print, audiovisual, computer-based, and integrated technologies.
- UTILIZATION use processes and resources for learning by applying principles and theories of media utilization, diffusion, implementation, and policy-making.

- MANAGEMENT assess, acquire, plan, organize, manage, integrate, apply, coordinate, and supervise instructional technology by applying principles of knowledge organization, information management, project, resource, delivery system, and service delivery.
- EVALUATION evaluate the adequacy of instruction and learning by applying principles of problem analysis, criterion-referenced measurement, formative and summative evaluation, and long-range planning.

Certificate - Instructional Technology *(10-12 credits)*

Admission Requirements

- GPA: 2.75
- A baccalaureate degree from an accredited institution

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate. IM 504, IM 554, IM 555

Electives

IM 556, IM 562, IM 586, IM 600, IM 612, IM 634, IM 680, IM 686, IM 687

Program Student Learning Outcomes

- Candidates demonstrate the knowledge, skills, and dispositions to design conditions for learning by applying principles, theories, and research associated with instructional systems design, message design, instructional strategies, and learner characteristics.
- Candidates demonstrate the knowledge, skills, and dispositions to develop instructional materials and experiences by applying principles, theories, and research related to print, audiovisual, computer-based, and integrated technologies.
- Candidates demonstrate the knowledge, skills, and dispositions to use processes and resources for learning by applying principles, theories, and research related to media utilization, diffusion, implementations, and policy-making.
- Candidates demonstrate knowledge, skills, and dispositions to evaluate the adequacy of instruction and learning by applying principles, theories, and research related to problem analysis, criterion-referenced measurement, formative and summative evaluation, and long-range planning.

Certificate - Library Media Specialist *(15 credits)*

Admission Requirements

- GPA: 2.75
- A baccalaureate degree from an accredited institution
- Application for admission to the Library Media Specialist Graduate Certificate Program through the School of Graduate Studies.

Notes

- To qualify for Minnesota licensure as a School Library Media Specialists candidates must complete all course work necessary to meet the competencies specified in State of Minnesota Rule 8710.2000 and 8710.4550 and pass the applicable MTLE tests.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate. IM 620, IM 628

Electives

IM 502, IM 504, IM 555, IM 612, IM 621, IM 625, IM 626, IM 682

Program Student Learning Outcomes

- Candidates demonstrate the ability to develop and implement an information media program that reflects the vision, mission, and goals of the school.
- Candidates demonstrate the ability to develop and implement an information media program that is an integral part of the total curriculum.

- Candidates demonstrate the ability to develop and implement information media program policies and procedures consistent with principles of professional practice and appropriate to the mission and goals of the school and district.
- Candidates demonstrate the ability to initiate and maintain motivating, technology-current and research-based environments that foster the continued professional growth of the learning community.
- Candidates demonstrate an understanding of the teaching of information media with the understanding of pedagogy, students, learning, classroom management, and professional development.
- Candidates apply appropriate research methods and findings in professional practice: the candidates understand, apply, and integrate research into teaching and learning and uses various resources available to inform best practice and add to the professional knowledge base.

Licensure - Library Media Specialist *(29 credits)*

Admission Requirements

- GPA: 2.75
- Hold a baccalaureate degree from an accredited institution

Program Requirements

This program provides coursework leading to eligibility for licensure. IM 502, IM 504, IM 555, IM 612, IM 620, IM 621, IM 625, IM 626, IM 628, IM 682.

Program Student Learning Outcomes

- Candidates demonstrate the ability to develop and implement an information media program that reflects the vision, mission, and goals of the school.
- Candidates demonstrate the ability to develop and implement an information media program that is an integral part of the total curriculum.
- Candidates demonstrate the ability to develop and implement information media program policies and procedures consistent with principles of professional practice and appropriate to the mission and goals of the school and district.
- Candidates demonstrate the ability to initiate and maintain motivating, technology-current and research-based environments that foster the continued professional growth of the learning community.
- Candidates demonstrate an understanding of the teaching of information media with the understanding of pedagogy, students, learning, classroom management, and professional development.
- Candidates apply appropriate research methods and findings in professional practice: the candidates understand, apply, and integrate research into teaching and learning and uses various resources available to inform best practice and add to the professional knowledge base.

Certificate - Technology Integration *(15 credits)*

- Admission RequirementsThe GRE is not required.
- Hold a baccalaureate degree from an accredited institution
- GPA requirements of the School of Graduate Studies

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate. IM 504, IM 514, IM 555, IM 556, IM 612.

Plan B

Option(s):
Credits: 15
Core: IM 504, IM 514, IM 555, IM 556, IM 612
Electives:
Research:

MS

Information Media

Chairperson: Jennifer Jay
Address: A132 Education Building
Phone: 320.308.2062

Email: im@stcloudstate.edu
Website: www.stcloudstate.edu/im

MS - Information Media Program One: Technology Integration *(39-42 credits)*

Admission Requirements

- GPA: 2.75
- A baccalaureate degree from a regionally accredited institution
- GRE is required. See program website for exceptions.
- If required to take the GRE, 3.0 or higher on the analytical writing portion
- Written and oral examination required

Notes

- Preliminary Course Work: Courses in the major core should be taken at the beginning of the program. Culminating Course Work and Activities: These courses should be taken at the end of the program: IM 681, IM 696, IM 697, or IM 699.

Plan A
Option(s): Thesis
Credits: 42
Core: IM 502, IM 504, IM 514, IM 554, IM 555, IM 556, IM 562, IM 612, IM 646, IM 681
Electives: 0-5 Cr.: Courses to be selected in consultation with adviser from related fields, general study from courses, or courses in the major: IM 521, IM 522, IM 523, IM 545, IM 586, IM 620, IM 622, IM 623, IM 626, IM 628, IM 632, IM 634, IM 638, IM 656, IM 686, IM 687
Research: IM 608, IM 699.

Plan B
Option(s): Starred Paper(s)
Credits: 39
Core: IM 502, IM 504, IM 514, IM 554, IM 555, IM 556, IM 562, IM 612, IM 646, IM 681
Electives: 1-6 Cr.: Courses to be selected in consultation with adviser from related fields, general study from courses, or courses in the major: IM 521, IM 522, IM 523, IM 545, IM 586, IM 620, IM 622, IM 623, IM 626, IM 628, IM 632, IM 634, IM 638, IM 656, IM 686, IM 687
Research: IM 608, IM 697

Plan C
Option(s): Portfolio/Project
Credits: 39
Core: IM 502, IM 504, IM 514, IM 554, IM 555, IM 556, IM 562, IM 612, IM 646, IM 681
Electives: 1-6 Cr.: Courses to be selected in consultation with adviser from related fields, general study from courses, or courses in the major: IM 521, IM 522, IM 523, IM 545, IM 586,IM 620, IM 622, IM 623, IM 626, IM 628, IM 632, IM 634, IM 638, IM 656, IM 686, IM 687
Research: IM 608, IM 696

Program Student Learning Outcomes

- Candidates demonstrate the knowledge, skills, and dispositions to design conditions for learning by applying principles, theories, and research associated with instructional systems design, message design, instructional strategies, and learner characteristics.
- Candidates demonstrate the knowledge, skills, and dispositions to develop instructional materials and experiences by applying principles, theories, and research related to print, audiovisual, computer-based, and integrated technologies.
- Candidates demonstrate the knowledge, skills, and dispositions to use processes and resources for learning by applying principles, theories, and research related to media utilization, diffusion, implementations, and policy-making.
- Candidates demonstrate knowledge, skills, and dispositions to plan, organize, coordinate, and supervise instructional technology by applying principles, theories and research related to project, resource, delivery system, and information management.
- Candidates demonstrate knowledge, skills, and dispositions to evaluate the adequacy of instruction and learning by applying principles, theories, and research related to problem analysis, criterion-referenced measurement, formative and summative evaluation, and long-range planning.
- Candidates apply appropriate research methods and findings in professional

practice: the candidates understand, apply, and integrate research into teaching and learning and uses various resources available to inform best practice and add to the professional knowledge base.

MS - Information Media Program Two: Library Media *(39-42 credits)*

Admission Requirements

- GPA: 2.75
- A baccalaureate degree from an accredited institution
- GRE is required except for students with a GPA of 3.25 or higher in their undergraduate program.
- If required to take the GRE, 3.0 or higher on the analytical writing portion
- Written and oral examination required

Notes

- Preliminary course work: IM 502 and IM 620 should be taken near the beginning of the program. Culminating Course Work and Activities: These courses should be taken at the end of the program: IM 682, IM 696, IM 697, IM 699.

Plan A
Option(s): Thesis
Credits: 42
Core: IM 502, IM 504, IM 554, IM 555, IM 612, IM 620, IM 621, IM 625, IM 626, IM 628, IM 682
Electives: 0-4 Cr.: Courses to be selected in consultation with adviser from related fields, general study from courses, or courses in the major: IM 521, IM 522, IM 523, IM 545, IM 556, IM 562, IM 586, IM 632, IM 634, IM 638, IM 646, IM 656, IM 682, IM 686, IM 687
Research: IM 608, IM 699.

Plan B
Option(s): Starred Paper(s)
Credits: 39
Core: IM 502, IM 504, IM 554, IM 555, IM 612, IM 620, IM 621, IM 625, IM 626, IM 628, IM 682
Electives: 0-5 Cr.: Courses to be selected in consultation with adviser from related fields, general study from courses, or courses in the major: IM 521, IM 522, IM 523, IM 545, IM 556, IM 562, IM 586, IM 632, IM 634, IM 638, IM 646, IM 656, IM 682, IM 686, IM 687
Research: IM 608, IM 697

Plan C
Option(s): Portfolio/Project
Credits: 39
Core: IM 502, IM 504, IM 554, IM 555, IM 612, IM 620, IM 621, IM 625, IM 626, IM 628, IM 682
Electives: 0-5 Cr.: Courses to be selected in consultation with adviser from related fields, general study from courses, or courses in the major: IM 521, IM 522, IM 523, IM 545, IM 556, IM 562, IM 586, IM 632, IM 634, IM 638, IM 646, IM 656, IM 682, IM 686, IM 687
Research: IM 608, IM 696

Program Student Learning Outcomes

- Candidates demonstrate the ability to develop and implement an information media program that reflects the vision, mission, and goals of the school.
- Candidates demonstrate the ability to develop and implement an information media program that is an integral part of the total curriculum.
- Candidates demonstrate the ability to develop and implement information media program policies and procedures consistent with principles of professional practice and appropriate to the mission and goals of the school and district.
- Candidates demonstrate the ability to initiate and maintain motivating, technology-current and research-based environments that foster the continued professional growth of the learning community.
- Candidates demonstrate an understanding of the teaching of information media with the understanding of pedagogy, students, learning, classroom management, and professional development.
- Candidates apply appropriate research methods and findings in professional practice: the candidates understand, apply, and integrate research into teaching and learning and uses various resources available to inform best

practice and add to the professional knowledge base.

MS - Information Media Program Three: Instructional Design and E-Learning *(39-45 credits)*

Admission Requirements

- GPA: 2.75
- A baccalaureate degree from a regionally accredited institution
- GRE is required. See program website for exceptions.
- If required to take the GRE, 3.0 or higher on the analytical writing portion
- Written and oral examination required

Notes

- Preliminary Course Work: Courses in the major core should be taken at the beginning of the program. Culminating Course Work and Activities: These courses should be taken at the end of the program: IM 680, IM 696, IM 697, or IM 699.

Plan A
Option(s): Thesis
Credits: 40-45
Core: 34-39 credits: IM 502, IM 554, IM 612, IM 632, IM 633, IM 639, IM 646, IM 656, IM 680. Students who did not enroll in IM 404, IM 455, or IM 456 at the undergraduate level at SCSU are also required to take IM 504, IM 555, and IM 556. Students who completed IM 404, IM 455, and IM 456 must choose 3-9 credits of additional electives.
Electives: 0-14 credits from the following list selected in consultation with an adviser: IM 522, IM 562, IM 586, IM 620, IM 621, IM625, IM 626, IM 628, IM 686, IM 687
Research: 6 credits: IM 608, IM 699.

Plan B
Option(s): Starred Paper(s)
Credits: 39-44
Core: 34-39 credits: IM 502, IM 554, IM 612, IM 632, IM 633, IM 639, IM 646, IM 656, IM 680. Students who did not enroll in IM 404, IM 455, or IM 456 at the undergraduate level at SCSU are also required to take IM 504, IM 555, and IM 556. Students who completed IM 404, IM 455, and IM 456 must choose 3-9 credits of additional electives.
Electives: 0-9 credits from the following list selected in consultation with an adviser: IM 522, IM 562, IM 586, IM 620, IM 621, IM625, IM 626, IM 628, IM 686, IM 687
Research: 5 credits: IM 608, IM 697

Plan C
Option(s): Portfolio/Project
Credits: 39-44
Core: 34-39 credits: IM 502, IM 554, IM 612, IM 632, IM 633, IM 639, IM 646, IM 656, IM 680. Students who did not enroll in IM 404, IM 455, or IM 456 at the undergraduate level at SCSU are also required to take IM 504, IM 555, and IM 556. Students who completed IM 404, IM 455, and IM 456 must choose 3-9 credits of additional electives.
Electives: 0-9 credits from the following list selected in consultation with an adviser: IM 522, IM 562, IM 586, IM 620, IM 621, IM625, IM 626, IM 628, IM 686, IM 687
Research: 5 credits: IM 608, IM 696

Program Student Learning Outcomes

- Candidates apply appropriate research methods and findings in professional practice: the candidates understand, apply, and integrate research into teaching and learning and uses various resources available to inform best practice and add to the professional knowledge base.
- Candidates will identify and resolve ethical and legal implications of design in the work place.
- Candidates will demonstrate the ability to conduct analysis before planning a program or curriculum, including a needs assessment, assessment of target population characteristics and environment characteristics and other elements of a situation.
- Candidates will plan a program or curriculum using a variety of techniques for determining instructional content, analyzing the characteristics of existing and emerging technologies and their use in an instructional environment and reflecting upon them before finalizing design solutions and strategies.

- Candidates will design and develop programs or curricula that reflect an understanding of the diversity of learners. They will select and use a variety of techniques to define and sequence the instructional content and strategies, create, select or modify existing instructional materials and evaluate and assess instruction and its impact.
- Candidates will apply business skills to plan and manage instructional design projects and promote collaboration, partnerships and relationships among the participants in a design project.
- Candidates will provide for the effective implementation of instructional products and programs and design instructional management systems.

Kinesiology

Kinesiology

Kinesiology

Chairperson: Laura Finch
Address: 327 Halenbeck Hall
Phone: 320.308.4251
Email: kinesiology@stcloudstate.edu
Website: www.stcloudstate.edu/kinesiology

BS - Athletic Training *(52 credits)*

Admission Requirements

- GPA: 2.50
- Completion of PESS 249, PESS 303, PESS 304 with a grade of "C-" or better.
- Completion of admission packet, essay and interview if an eligibility requirements completed.
- Athletic Training Degree Requirement Changes: Changes in the degree requirements by the National Athletic Training Association and the Commission on Accreditation of Athletic Training Education Programs require Athletic Training programs change from a Bachelor's degree to a Masters Level entry degree. Saint Cloud State University's undergraduate Athletic Training program will graduate its last Bachelor degree students at the end of Spring semester in the academic year 2021-2022. Incoming first year students for academic year 2019-2020 and later will not have the undergraduate athletic training major available to them. If you have questions, please contact Sean Degerstrom (email: sddegerstrom@stcloudstate.edu or voice mail: 320-308-4718) or the Kinesiology department at 320-308-4251.

Notes

- All students must maintain a grade point of 2.75 in the major with no required course's grade below a "C-".
- PESS 303, PESS 307, PESS 308, PESS 309, PESS 310, PESS 311, PESS 313, PESS 314, PESS 315, PESS 316, PESS 317, PESS 318, PESS 405, and PESS 406 must be taken at SCSU (no course transfer, arranged class, independent study, assessment of prior learning or credit by examination acceptable).
- PESS 303 requires a minimum of 8 to 10 hours per week observation in the athletic training rooms. PESS 307, PESS 308, PESS 309, PESS 310 and PESS 311 each require a minimum of 15 hours to a maximum of 20 hours per week depending on sport assignments in the athletic training rooms or clinical sites.
- PESS 311 will require the student to be at off campus clinical sites. Students must provide their own transportation to the clinical site and pay parking if required. Students must pay for a background check prior to placement if required by the clinical site.
- CPR/AED and First Aid certification required at the time of admission and must be maintained throughout the program. Students are required to have and maintain professional liability insurance and CPR certification once accepted to the Athletic Training Program. Students must progress through the ATP specific courses as outlined in the degree map for their cohort.

Program Requirements
All required courses must be taken for an "A-F" grade. HLTH 210, HLTH 412; PESS 249, PESS 303, PESS 304, PESS 307, PESS 308, PESS 309, PESS 310, PESS 311, PESS 313, PESS 314, PESS 315, PESS 316, PESS 317, PESS 318, PESS 349, PESS 405, PESS 406, PESS 448, PESS 449.

Program Student Learning Outcomes

- Facilitate student knowledge, and clinical skill development as the foundation for sound practice and leadership in the profession of Athletic Training by: Providing students with educational opportunities both in the classroom and clinical environments to obtain the competencies and proficiencies required for entry level athletic trainers.
- Facilitate student knowledge, and clinical skill development as the foundation for sound practice and leadership in the profession of Athletic Training by: Exposing athletic training students to research and the value research plays in the future growth of the athletic training profession.
- Facilitate student knowledge, and clinical skill development as the foundation for sound practice and leadership in the profession of Athletic Training by: Continually monitor and evaluate the ATP to insure it is compliance with the educational competency and clinical proficiency as required by the Commission on Accreditation of Athletic Training Education.

BS - Community Health *(53 credits)*

Admission Requirements

- GPA: 2.50
- C- or better in all major courses.
- Completed HLTH 210, HLTH 215, HLTH 225, HLTH 325 and PESS 249 or BIOL 202 with a C- or better.

Notes

- Students may have no more than 7 credits of C- or lower in courses required for the Community Health major. Courses within the major must be taken for a letter grade except for Internships and Independent Studies.
- Students must take 15 credits of Community Health program requirements at SCSU (excluding HLTH 444: Internship, General, HLTH 446: Internship, Community Health and independent study courses). Additional transfer credits may be approved as electives with advisor permission.
- Admission to the major does not guarantee admission to the required internship program.
- Special fees are required for the following course: HLTH 446.
- To be eligible for the Community Health internship, students must: 1) Be admitted to the major; 2) Possess a 2.5 GPA in the Community Health major and 2.5 GPA overall with no more than 7 credits in the community health major at C- or lower; 3) Submit the internship application forms by the deadline; 4) Have an approved internship site approved one semester prior to the internship; 5) Provide evidence of current CPR (infant, child, adult), First Aid, and AED certification.

Program Requirements
37 credits: HLTH 210, HLTH 215, HLTH 225, HLTH 325, HLTH 350, HLTH 405, HLTH 425, HLTH 446, HLTH 475, HLTH 481, HLTH 482, HLTH 484. Select 7 credits from PESS 249 or BIOL 202; Select from STAT 239 or SOC 304.

Electives
9 credits: Select from the following: HLTH 250, HLTH 255, HLTH 412, HLTH 430, BIOL 362, CMTY 455, GERO 208, PHIL 481, POL 380, PSY 345, PSY 492, SOC 475.

Program Student Learning Outcomes

- Student will be able to demonstrate understanding of at least 4 health behavior models and theories. Students will be able to utilize knowledge of the determinants of health behavior and

health promotion in designing health prevention programs.
- Students will be able to use epidemiologic methods to analyze patterns of disease and injury and discuss application to control problems. Students will be able to design and implement health education program utilizing a variety of complex technologies.
- Students will identify how various Public Health organizations work collaboratively to solve health issues and concerns. Describe the core functions of public health.
- Students will be able to understand the relationship between environmental factors and community health; discuss remediation for environmental health problems.
- Students will identify the leading causes of mortality, morbidity, and health disparities among local, regional, and global populations.
- Students will be able to identify the basic sociological and psychological concepts, processes, approaches, and interventions that address the major health-related needs and concerns of individuals and communities.
- Students will be able to describe risk factors and modes of transmission for infectious and chronic diseases and how these diseases affect both personal and public health.
- Students will be able to conduct literature searches and written papers on a health issues using a variety of academic and public resources to include references and related resources, regarding a current issue, related trends, and potential interventions for an assigned public health challenge.
- Students will be able to Assess Needs, Assets and Capacity for Health Education.

BS - Health and Physical Education *(55 credits)*

Admission Requirements

- GPA: 2.50
- Submission of a written essay that earns a minimum score of 7/10 (department rubric) and completion of a successful interview (see Department for specifics).

Notes

- Courses within major must be taken for a letter grade; only letter grades of C- or better will be accepted for the major.
- Students must show evidence of a Water Safety Instructor certification and have a current certification in Responding to Emergencies or equivalent for student teaching.
- MTLE Pedagogy and Content Area Test(s) must be successfully completed prior to applying for a Minnesota teaching license.
- Program Dispositions must score a minimum of 2 prior to entering HPE 457. Any candidate who does not successfully navigate Disposition remediation or has received a second score of 0 or 1 in the same area will be removed from the program and may not re-apply for one complete academic year.

Program Requirements

HPE 200, HPE 207, HPE 295, HPE 298, HPE 310, HPE 320, HPE 375, HPE 376, HPE 407, HPE 420, HPE 434, HPE 438, HPE 439, HPE 447, HPE 457, HPE 458, PESS 249, PESS 300, PESS 312, PESS 461.

Program Student Learning Outcomes

- Understands, applies, and assesses the skills necessary to perform varied physical activities.
- Understands disciplinary knowledge of Physical Education and personal Health/Wellness.
- Demonstrates an understanding that integrates Health, Physical Education with the understanding of pedagogy, students, learning, classroom management, and professional development.
- Understands concepts related to health promotion and disease prevention.
- Understands how to use goal-setting and decision-making skills to enhance health and fitness.

- Applies the standards of effective practice in teaching students through a variety of early and ongoing clinical experiences.

BS - Physical Education *(45 credits)*

Admission Requirements

- GPA: 2.50

Notes

- All courses in the Physical Education Teacher Education major must be taken prior to student teaching.
- Students must show evidence of a Water Safety Instruction certification and have a current certification in Responding to Emergencies or equivalent for student teaching.
- MTLE Pedagogy and Content Area Test(s) must be successfully completed prior to applying for a Minnesota teaching license.
- Program Dispositions must score a minimum of 2 prior to entering HPE 457. Any candidate who does not successfully navigate Disposition remediation or has received a second score of 0 or 1 in the same area will be removed from the program and may not re-a

Program Requirements

45 credits: PESS 249, PESS 300, PESS 312, PESS 333, PESS 461, HPE 200, HPE 207, HPE 295, HPE 298, HPE 320, HPE 375, HPE 376, HPE 407, HPE 434, HPE 447.

Program Student Learning Outcomes

- Understands, applies and assesses the skills necessary to perform varied physical activities.
- Understands disciplinary knowledge of physical education and personal health/wellness.
- Demonstrates an understanding that integrates physical education with the understanding of pedagogy, students, learning classroom management and professional development.
- Understands concepts related to health promotion and disease prevention.
- Understands how to use goal-setting and decision-making skills to enhance health and fitness.
- Applies the standards of effective practice in teaching students through a variety of early and ongoing clinical experiences.

BS - Recreation and Sports Management *(53 credits)*

- Admission RequirementsComplete REC 201, REC 241, REC 301 and ACCT 291 with overall and major GPA of 2.6 before admission to remaining REC courses.

Notes

- C or better in all courses required in the major.
- 15 credits of required REC courses (not including independent study/topic courses) must be taken at SCSU prior to enrolling in REC 444: Senior Internship. Additional transfer credits may be approved as electives with advisor permission.
- 2.75 major GPA and current certification in CPR/AED and First Aid required prior to enrollment in REC 444: Senior Internship.

Program Requirements

47 credits: REC 201, REC 241, REC 301, REC 333, REC 415, REC 416, REC 418, REC 420, REC 433, REC 444, PESS 370, ACCT 291, BLAW 235, MGMT 201, and MKTG 220

Electives

6 credits of advisor approved electives at the 300-400 level.

REC 433

Program Student Learning Outcomes

- Conceptual foundations of play, games, recreation, leisure, sport, and events.
- Professional competence, organizations, standards of practice and ethics.

- Interrelationship of delivery systems for diverse and inclusive populations.
- Program and event planning and operations.
- Management principles and procedures in the operations of sport/leisure service organizations.
- Legal aspects for the operations of sport/leisure service organizations.
- Field experiences.

BES - Physical Education-BES (non teaching) *(36 credits)*

Admission Requirements

- GPA: 2.50

Program Requirements

Completion of 36 credits with approval of department. This option allows students, in conjunction with their advisor, the opportunity to design a specialized program in BES-Physical Education.

Minor - Athletic Coaching *(19 credits)*

Notes

- Must have current CPR/AED and First Aid certifications and 2.5 minor GPA to enroll in PESS 431: Coaching Practicum.

Program Requirements

19 credits: PESS 249, PESS 304, PESS 370, PESS 450, PESS 491, PESS 431. Select one course (2 cr.) from the following: PESS 221, PESS 250, PESS 251, PESS 252, PESS 253, PESS 254, PESS 255, PESS 256, PESS 257, PESS 258, PESS 259, PESS 260.

BES - Athletic Coaching Minor *(19 credits)*

Notes

- Must have current CPR/AED and First Aid certifications and 2.5 minor GPA to enroll in PESS 431: Coaching Practicum.

Program Requirements

19 credits: PESS 249, PESS 304, PESS 370, PESS 431, PESS 450, PESS 491. Select one course (2 cr.) from the following: PESS 221, PESS 250, PESS 251, PESS 252, PESS 253, PESS 254, PESS 255, PESS 256, PESS 257, PESS 258, PESS 259, PESS 260.

Minor - Community Health *(25 credits)*

Admission Requirements

- GPA: 2.50 GPA overall
- Completed HLTH 210, HLTH 215, and one of the following: HLTH 225, HLTH 325 or PESS 249 or BIOL 202, with a C- or better.
- Admitted to a major

Notes

- Students may have no more than 7 credits of C- or lower in courses required for the Community Health minor.
- Courses within the minor must be taken for a letter grade except for Internships and Independent Studies.
- Students must take 13 credits of Community Health program requirements at SCSU (excluding HLTH 444: Internship, General, HLTH 446: Internship, Community Health and independent study courses). Additional transfer credits may be approved as electives with advisor permission.

Program Requirements

19 credits: PESS 249; HLTH 210, HLTH 215, HLTH 225, HLTH 325, HLTH 484.

Electives

6 credits from HLTH 250, HLTH 255, HLTH 350, HLTH 412, HLTH 475, HLTH 481, HLTH 482.

Program Student Learning Outcomes

- Student will be able to demonstrate understanding of at least 4 health behavior models and theories.
- Students will be able to utilize knowledge of the determinants of health behavior and health promotion in designing health prevention programs.
- Students will be able to design and implement health education program utilizing a variety of complex technologies.
- Students will be able to design and implement health education program utilizing a variety of complex technologies.

- Students will identify how various Public Health organizations work collaboratively to solve health issues and concerns. Describe the core functions of public health.
- Students will be able to understand the relationship between environmental factors and community health; discuss remediation for environmental health problems.
- Students will identify the leading causes of mortality, morbidity, and health disparities among local, regional, and global populations.
- Students will be able to identify the basic sociological and psychological concepts, processes, approaches, and interventions that address the major health-related needs and concerns of individuals and communities.
- Students will be able to describe risk factors and modes of transmission for infectious and chronic diseases and how these diseases affect both personal and public health. Students will be able to Assess Needs, Assets and Capacity for Health Education.
- Students will be able to conduct literature searches and written papers on a health issues using a variety of academic and public resources to include references and related resources, regarding a current issue, related trends, and potential interventions for an assigned public health challenge.

BES - Community Health Minor *(25 credits)*

- Admission RequirementsGPA: 2.50 GPA Overall
- Completed HLTH 210, HLTH 215, and one of the following: HLTH 225, HLTH 325 or PESS 249 or BIOL 202, with a C- or better.
- Admitted to a major.

Notes

- Students may have no more than 7 credits of C- or lower in courses required for the Community Health minor.
- Courses within the minor must be taken for a letter grade except for Internships and Independent Studies.
- Students must take 13 credits of Community Health program requirements at SCSU (excluding HLTH 444: Internship, General, HLTH 446, Internship, Community Health and independent study courses). Additional transfer credits may be approved as electives with advisor permission.

Program Requirements
19 credits: PESS 249, HLTH 210, HLTH 215, HLTH 225, HLTH 325, HLTH 484.

Electives
6 credits from: HLTH 250, HLTH 255, HLTH 350, HLTH 412, HLTH 475, HLTH 481, HLTH 482.

Minor - Sport Management *(21 credits)*

Program Requirements
12 credits. ACCT 291, REC 201, REC 241, and REC 301.

Electives
9 credits. Choose three of the following courses: REC 333, REC 415, REC 416, REC 418, REC 420.

Athletic Coaching

Kinesiology

Chairperson: Laura Finch
Address: 327 Halenbeck Hall
Phone: 320.308.4251
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Website: www.stcloudstate.edu/kinesiology

Minor - Athletic Coaching *(19 credits)*

Notes

- Must have current CPR/AED and First Aid certifications and 2.5 minor GPA to enroll in PESS 431: Coaching Practicum.

Program Requirements
19 credits: PESS 249, PESS 304, PESS 370, PESS 450, PESS 491, PESS 431. Select one course (2 cr.) from the following: PESS 221, PESS 250, PESS 251, PESS 252, PESS 253, PESS 254, PESS 255, PESS 256, PESS 257, PESS 258, PESS 259, PESS 260.

BES - Athletic Coaching Minor *(19 credits)*

Notes

- Must have current CPR/AED and First Aid certifications and 2.5 minor GPA to enroll in PESS 431: Coaching Practicum.

Program Requirements

19 credits: PESS 249, PESS 304, PESS 370, PESS 431, PESS 450, PESS 491. Select one course (2 cr.) from the following: PESS 221, PESS 250, PESS 251, PESS 252, PESS 253, PESS 254, PESS 255, PESS 256, PESS 257, PESS 258, PESS 259, PESS 260.

Athletic Training - BS

Kinesiology

Chairperson: Laura Finch
Address: 327 Halenbeck Hall
Phone: 320.308.4251
Email: kinesiology@stcloudstate.edu
Website: www.stcloudstate.edu/kinesiology

BS - Athletic Training *(52 credits)*

Admission Requirements

- GPA: 2.50
- Completion of PESS 249, PESS 303, PESS 304 with a grade of "C-" or better.
- Completion of admission packet, essay and interview if an eligibility requirements completed.
- Athletic Training Degree Requirement Changes: Changes in the degree requirements by the National Athletic Training Association and the Commission on Accreditation of Athletic Training Education Programs require Athletic Training programs change from a Bachelor's degree to a Masters Level entry degree. Saint Cloud State University's undergraduate Athletic Training program will graduate its last Bachelor degree students at the end of Spring semester in the academic year 2021-2022. Incoming first year students for academic year 2019-2020 and later will not have the undergraduate athletic training major available to them. If you have questions, please contact Sean Degerstrom (email: sddegerstrom@stcloudstate.edu or voice mail: 320-308-4718) or the Kinesiology department at 320-308-4251.

Notes

- All students must maintain a grade point of 2.75 in the major with no required course's grade below a "C-".
- PESS 303, PESS 307, PESS 308, PESS 309, PESS 310, PESS 311, PESS 313, PESS 314, PESS 315, PESS 316, PESS 317, PESS 318, PESS 405, and PESS 406 must be taken at SCSU (no course transfer, arranged class, independent study, assessment of prior learning or credit by examination acceptable).
- PESS 303 requires a minimum of 8 to 10 hours per week observation in the athletic training rooms. PESS 307, PESS 308, PESS 309, PESS 310 and PESS 311 each require a minimum of 15 hours to a maximum of 20 hours per week depending on sport assignments in the athletic training rooms or clinical sites.
- PESS 311 will require the student to be at off campus clinical sites. Students must provide their own transportation to the clinical site and pay parking if required. Students must pay for a background check prior to placement if required by the clinical site.
- CPR/AED and First Aid certification required at the time of admission and must be maintained throughout the program. Students are required to have and maintain professional liability insurance and CPR certification once accepted to the Athletic Training Program. Students must progress through the ATP specific courses as outlined in the degree map for their cohort.

Program Requirements

All required courses must be taken for an "A-F" grade. HLTH 210, HLTH 412; PESS 249, PESS 303, PESS 304, PESS 307, PESS 308, PESS 309, PESS 310, PESS 311, PESS 313, PESS 314, PESS 315, PESS 316, PESS 317, PESS 318, PESS 349, PESS 405, PESS 406, PESS 448, PESS 449.

Program Student Learning Outcomes

- Facilitate student knowledge, and clinical skill development as the foundation for sound practice and leadership in the profession of Athletic Training by: Providing students with educational opportunities both in the classroom and clinical environments to obtain the competencies and proficiencies required for entry level athletic trainers.
- Facilitate student knowledge, and clinical skill development as the foundation for sound practice and leadership in the profession of Athletic Training by: Exposing athletic training students to research and the value research plays in the future growth of the athletic training profession.
- Facilitate student knowledge, and clinical skill development as the foundation for sound practice and leadership in the profession of Athletic Training by: Continually monitor and evaluate the ATP to insure it is compliance with the educational competency and clinical proficiency as required by the Commission on Accreditation of Athletic Training Education.

Community Health - BS

Kinesiology

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BS - Community Health *(54 credits)*

Admission Requirements

- GPA: 2.50
- C- or better in all major courses.
- Completed HLTH 210, HLTH 215, HLTH 225, HLTH 325 and PESS 249 or BIOL 202 with a C- or better.

Notes

- Students may have no more than 7 credits of C- or lower in courses required for the Community Health major. Courses within the major must be taken for a letter grade except for Internships and Independent Studies.
- Students must take 15 credits of Community Health program requirements at SCSU (excluding HLTH 444: Internship, General, HLTH 446: Internship, Community Health and independent study courses). Additional transfer credits may be approved as electives with advisor permission.
- Admission to the major does not guarantee admission to the required internship program.
- Special fees are required for HLTH 446: Internship
- To be eligible for the Community Health internship, students must: 1) Be admitted to the major; 2) Possess a 2.5 GPA in the Community Health major and 2.5 GPA overall with no more than 7 credits in the community health major at C- or lower; 3) Submit the internship application forms by the deadline; 4) Have an approved internship site approved one semester prior to the internship; 5) Provide evidence of current CPR (infant, child, adult), First Aid, and AED certification.

Program Requirements

48 credits: HLTH 210, HLTH 215, HLTH 225, HLTH 250, HLTH 325, HLTH 350, HLTH 405, HLTH 425, HLTH 446, HLTH 475, HLTH 481, HLTH 482, HLTH 484. PESS 249 or BIOL 202, and STAT 239 or SOC 304.

Electives

6 credits: Select from the following: HLTH 255, HLTH 412, HLTH 430, BIOL 362, CMTY 455, GERO 208, PHIL 481, POL 380, PSY 345, PSY 492, SOC 475.

HLTH 484

Program Student Learning Outcomes

- Student will be able to demonstrate understanding of at least 4 health

behavior models and theories. Students will be able to utilize knowledge of the determinants of health behavior and health promotion in designing health prevention programs.
- Students will be able to use epidemiologic methods to analyze patterns of disease and injury and discuss application to control problems. Students will be able to design and implement health education program utilizing a variety of complex technologies.
- Students will identify how various Public Health organizations work collaboratively to solve health issues and concerns. Describe the core functions of public health.
- Students will be able to understand the relationship between environmental factors and community health; discuss remediation for environmental health problems.
- Students will identify the leading causes of mortality, morbidity, and health disparities among local, regional, and global populations.
- Students will be able to identify the basic sociological and psychological concepts, processes, approaches, and interventions that address the major health-related needs and concerns of individuals and communities.
- Students will be able to describe risk factors and modes of transmission for infectious and chronic diseases and how these diseases affect both personal and public health.
- Students will be able to conduct literature searches and written papers on a health issues using a variety of academic and public resources to include references and related resources, regarding a current issue, related trends, and potential interventions for an assigned public health challenge.
- Students will be able to Assess Needs, Assets and Capacity for Health Education.

Minor - Community Health *(25 credits)*

Admission Requirements

- GPA: 2.50 GPA overall
- Completed HLTH 210, HLTH 215, and one of the following: HLTH 225, HLTH 325 or PESS 249 or BIOL 202, with a C- or better.
- Admitted to a major

Notes

- Students may have no more than 7 credits of C- or lower in courses required for the Community Health minor.
- Courses within the minor must be taken for a letter grade except for Internships and Independent Studies.
- Students must take 13 credits of Community Health program requirements at SCSU (excluding HLTH 444: Internship, General, HLTH 446: Internship, Community Health and independent study courses). Additional transfer credits may be approved as electives with advisor permission.

Program Requirements
19 credits: PESS 249; HLTH 210, HLTH 215, HLTH 225, HLTH 325, HLTH 484.

Electives
6 credits from HLTH 250, HLTH 255, HLTH 350, HLTH 412, HLTH 475, HLTH 481, HLTH 482.

Program Student Learning Outcomes

- Student will be able to demonstrate understanding of at least 4 health behavior models and theories.
- Students will be able to utilize knowledge of the determinants of health behavior and health promotion in designing health prevention programs.
- Students will be able to design and implement health education program utilizing a variety of complex technologies.
- Students will be able to design and implement health education program utilizing a variety of complex technologies.
- Students will identify how various Public Health organizations work

collaboratively to solve health issues and concerns. Describe the core functions of public health.
- Students will be able to understand the relationship between environmental factors and community health; discuss remediation for environmental health problems.
- Students will identify the leading causes of mortality, morbidity, and health disparities among local, regional, and global populations.
- Students will be able to identify the basic sociological and psychological concepts, processes, approaches, and interventions that address the major health-related needs and concerns of individuals and communities.
- Students will be able to describe risk factors and modes of transmission for infectious and chronic diseases and how these diseases affect both personal and public health. Students will be able to Assess Needs, Assets and Capacity for Health Education.
- Students will be able to conduct literature searches and written papers on a health issues using a variety of academic and public resources to include references and related resources, regarding a current issue, related trends, and potential interventions for an assigned public health challenge.

BES - Community Health Minor *(25 credits)*

- Admission RequirementsGPA: 2.50 GPA Overall
- Completed HLTH 210, HLTH 215, and one of the following: HLTH 225, HLTH 325 or PESS 249 or BIOL 202, with a C- or better.
- Admitted to a major.

Notes

- Students may have no more than 7 credits of C- or lower in courses required for the Community Health minor.
- Courses within the minor must be taken for a letter grade except for Internships and Independent Studies.
- Students must take 13 credits of Community Health program requirements at SCSU (excluding HLTH 444: Internship, General, HLTH 446, Internship, Community Health and independent study courses). Additional transfer credits may be approved as electives with advisor permission.

Program Requirements
19 credits: PESS 249, HLTH 210, HLTH 215, HLTH 225, HLTH 325, HLTH 484.

Electives
6 credits from: HLTH 250, HLTH 255, HLTH 350, HLTH 412, HLTH 475, HLTH 481, HLTH 482.

Health and Physical Education - BS, BES

Kinesiology
Chairperson: Laura Finch
Address: 327 Halenbeck Hall
Phone: 320.308.4251
Email: kinesiology@stcloudstate.edu
Website: www.stcloudstate.edu/kinesiology

BS - Health and Physical Education *(55 credits)*
Admission Requirements

- GPA: 2.50
- Submission of a written essay that earns a minimum score of 7/10 (department rubric) and completion of a successful interview (see Department for specifics).

Notes

- Courses within major must be taken for a letter grade; only letter grades of C- or better will be accepted for the major.
- Students must show evidence of a Water Safety Instructor certification and have a current certification in Responding to Emergencies or equivalent for student teaching.
- MTLE Pedagogy and Content Area Test(s) must be successfully completed prior to applying for a Minnesota teaching license.

- Program Dispositions must score a minimum of 2 prior to entering HPE 457. Any candidate who does not successfully navigate Disposition remediation or has received a second score of 0 or 1 in the same area will be removed from the program and may not re-apply for one complete academic year.

Program Requirements
HPE 200, HPE 207, HPE 295, HPE 298, HPE 310, HPE 320, HPE 375, HPE 376, HPE 407, HPE 420, HPE 434, HPE 438, HPE 439, HPE 447, HPE 457, HPE 458, PESS 249, PESS 300, PESS 312, PESS 461.

Program Student Learning Outcomes

- Understands, applies, and assesses the skills necessary to perform varied physical activities.
- Understands disciplinary knowledge of Physical Education and personal Health/Wellness.
- Demonstrates an understanding that integrates Health, Physical Education with the understanding of pedagogy, students, learning, classroom management, and professional development.
- Understands concepts related to health promotion and disease prevention.
- Understands how to use goal-setting and decision-making skills to enhance health and fitness.
- Applies the standards of effective practice in teaching students through a variety of early and ongoing clinical experiences.

BS - Physical Education *(45 credits)*

Admission Requirements

- GPA: 2.50

Notes

- All courses in the Physical Education Teacher Education major must be taken prior to student teaching.
- Students must show evidence of a Water Safety Instruction certification and have a current certification in Responding to Emergencies or equivalent for student teaching.
- MTLE Pedagogy and Content Area Test(s) must be successfully completed prior to applying for a Minnesota teaching license.
- Program Dispositions must score a minimum of 2 prior to entering HPE 457. Any candidate who does not successfully navigate Disposition remediation or has received a second score of 0 or 1 in the same area will be removed from the program and may not re-a

Program Requirements
45 credits: PESS 249, PESS 300, PESS 312, PESS 333, PESS 461, HPE 200, HPE 207, HPE 295, HPE 298, HPE 320, HPE 375, HPE 376, HPE 407, HPE 434, HPE 447.

Program Student Learning Outcomes

- Understands, applies and assesses the skills necessary to perform varied physical activities.
- Understands disciplinary knowledge of physical education and personal health/wellness.
- Demonstrates an understanding that integrates physical education with the understanding of pedagogy, students, learning classroom management and professional development.
- Understands concepts related to health promotion and disease prevention.
- Understands how to use goal-setting and decision-making skills to enhance health and fitness.
- Applies the standards of effective practice in teaching students through a variety of early and ongoing clinical experiences.

BES - Physical Education-BES (non teaching) *(36 credits)*

Admission Requirements

- GPA: 2.50

Program Requirements
Completion of 36 credits with approval of department. This option allows students, in conjunction with their advisor, the opportunity to design a specialized program in BES-Physical Education.

Recreation and Sport Management - BS

Kinesiology

Chairperson: Laura Finch
Address: 327 Halenbeck Hall
Phone: 320.308.4251
Email: kinesiology@stcloudstate.edu
Website: www.stcloudstate.edu/kinesiology

BS - Recreation and Sports Management *(53 credits)*

- Admission RequirementsComplete REC 201, REC 241, REC 301 and ACCT 291 with overall and major GPA of 2.6 before admission to remaining REC courses.

Notes

- C or better in all courses required in the major.
- 15 credits of required REC courses (not including independent study/topic courses) must be taken at SCSU prior to enrolling in REC 444: Senior Internship. Additional transfer credits may be approved as electives with advisor permission.
- 2.75 major GPA and current certification in CPR/AED and First Aid required prior to enrollment in REC 444: Senior Internship.

Program Requirements
47 credits: REC 201, REC 241, REC 301, REC 333, REC 415, REC 416, REC 418, REC 420, REC 433, REC 444, PESS 370, ACCT 291, BLAW 235, MGMT 201, and MKTG 220

Electives
6 credits of advisor approved electives at the 300-400 level.

REC 433

Program Student Learning Outcomes

- Conceptual foundations of play, games, recreation, leisure, sport, and events.
- Professional competence, organizations, standards of practice and ethics.
- Interrelationship of delivery systems for diverse and inclusive populations.
- Program and event planning and operations.
- Management principles and procedures in the operations of sport/leisure service organizations.
- Legal aspects for the operations of sport/leisure service organizations.
- Field experiences.

Minor - Sport Management *(21 credits)*

Program Requirements
12 credits. ACCT 291, REC 201, REC 241, and REC 301.

Electives
9 credits. Choose three of the following courses: REC 333, REC 415, REC 416, REC 418, REC 420.

MS

Kinesiology

Chairperson: Laura Finch
Address: 327 Halenbeck Hall
Phone: 320.308.4251
Email: kinesiology@stcloudstate.edu
Website: www.stcloudstate.edu/kinesiology

MS - Exercise Science *(34 credits)*

Admission Requirements

- GPA: 3.0
- The GRE is required.
- Applicants should have a strong science background. Physiology students should have undergraduate course work in human anatomy, physiology, biochemistry, and exercise physiology. Biomechanics students should possess strong skills in calculus, statics and

Notes

- Interviews are not required but encouraged. Contact department for interview schedule.

Plan A
Option(s): Thesis
Credits: 34
Core: 19 credits: PESS 620, PESS 624, PESS 625, PESS 626, PESS 630, PESS 631
Electives: 6 credits. Select with approval of the advisor. Students in Exercise Science may take classes under the following course rubrics: BIOL, CHEM, CEEP, ENGR, HLTH, PESS, STAT.
Research: 9 credits: CEEP 678, PESS 699

Program Student Learning Outcomes

- Investigate topics that could only be studied in an equally well equipped laboratory setting.
- Conduct Research in the exercise and sport science area.
- Graduate students will demonstrate content knowledge of the literature in their chosen field.
- Graduate students will analyze experimental and/or observational results and draw appropriate conclusions from laboratory or field experiences.
- Graduate students will present scientific content (e.g., graduate seminars, lectures, poster sessions) and write the results of their original research consistent with requirements of current literature.

MS - Sports Management *(33-36 credits)*

Admission Requirements

- GPA: 2.75
- GRE is not required.

Notes

- All required courses must be completed with a B- or higher.

Plan A
Option(s): Thesis
Credits: 33
Core: 15 credits: PESS 610, PESS 640, PESS 658, PESS 660, PESS 661
Electives: 6 credits: Choose from PESS 548, PESS 549, PESS 550, PESS 654, PESS 690 or other courses with approval.
Research: 12 credits: PESS 601, CEEP 678, PESS 699 (6 credits)

Plan B
Option(s): Comprehensive Exam
Credits: 33
Core: 15 credits: PESS 610, PESS 640, PESS 658, PESS 660, PESS 661
Electives: 15 credits: Choose from PESS 548, PESS 549, PESS 550, PESS 654, PESS 690, PESS 680 (for no more than 3 credits) or other courses with approval.
Research: 3 credits: PESS 601

Plan C
Option(s): Portfolio/Internship
Credits: 36
Core: 21 credits: PESS 610, PESS 640, PESS 658, PESS 660, PESS 661, PESS 680 (6 credits)
Electives: 12 credits: Choose from PESS 548, PESS 549, PESS 550, PESS 654, PESS 690 or other courses with approval.
Research: 3 credits: PESS 601

Program Student Learning Outcomes

- Students will demonstrate effective written and verbal communication skills.
- Students will recognize and understand research methods relevant to sport management.
- Students will demonstrate ability to use the latest technology relative to their chosen career path.
- Students will recognize, evaluate, and implement effective leadership practices in the administration and management of sport programs.
- Students will develop the ability to apply sport management knowledge and expertise in a variety of sport settings.
- Students will provide evidence through writing the ability to effectively analyze, evaluate, and reflect on research in the field of sport management.

Languages & Cultures

French BA, BS, and Minor

Languages and Cultures

Chairperson: Lisa Loftis
Address: 113 Lawrence Hall
Phone: 320.308.4141
Email: forl@stcloudstate.edu
Website: www.stcloudstate.edu/forl

BA - French *(36 credits)*

- Admission RequirementsSee Department Webpage for placement guidelines.

Notes

- All major and minor credits must be earned at the 200-level or above.
- Any courses from another department, designated by the language section as applicable to a major/minor in that language, should have prior approval of the adviser and be listed on the major/minor application.
- Students must maintain a 2.5 GPA overall and a 2.5 GPA in major courses (200-level and above) in their language(s) in order to graduate with a major/minor from this department.
- This program currently is not accepting new students.

Program Requirements
FREN 201, FREN 202, FREN 220, FREN 310, FREN 331, FREN 345, FREN 450, FREN 457.

Electives
12 credits at 300 and 400 level in French. Students may take 3 credits outside the department in courses with a clear focus on French/Francophone cultures (e.g., History, Film Studies, Philosophy, Art History), with prior permission of major adviser. This major requires either one year in a language [other than French or English] OR a minor.

French majors satisfy the University's Upper Division Writing Requirement by successfully completing FREN 457.

Program Student Learning Outcomes

- Speaking at the Intermediate-High level on the ACTFL scale.
- Writing at the Intermediate-High level on the ACTFL scale.
- Listening at the Intermediate-High level on the ACTFL scale.
- Reading at the Intermediate-High level on the ACTFL scale.

BS - French *(40 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.

Notes

- See Languages and Cultures Department B.S. advisors for licensure requirements.
- This program currently is not accepting new students.

Program Requirements
FREN 201, FREN 202, FREN 220, FREN 301, FREN 302, FREN 331, FREN 450, 454; FORL 453, FORL 455. Six credits from FREN 411, FREN 421, FREN 431, FREN 432, FREN 460, ENGL 361. Students may take 3 credits outside the department in courses with a clear French focus (e.g. History, Film Studies, Philosophy, Art History), with prior permission of major advisor.

Electives
Students fulfill the University's Upper Division Writing Requirement by demonstrating Intermediate-high proficiency level according to the ACTFL guidelines through certified testing, as required by the Board of Teaching requirements.

Program Student Learning Outcomes

- Understand language as a system.
- Understand first and second language acquisition theory and how this informs practice.
- Demonstrate intermediate-high level speaking proficiency as defined in the

ACTFL Proficiency Guidelines established by the American Council on the Teaching of Foreign Languages.
- Comprehend, interpret, and evaluate information received in the target language through reading and listening at the level that results from demonstrating the speaking proficiency.
- Use familiar topics to write narratives and descriptions of a factual nature or routine correspondence consisting of several paragraphs at a level understandable to a native speaker of the target language.

Minor - French *(22 credits)*

Notes

- This program currently is not accepting new students.

Program Requirements

FREN 201, FREN 202, FREN 220, FREN 310, FREN 331, FREN 345. Select 3 credits of any 400-level FREN course.

German BA, BS, and Minor

Languages and Cultures

Chairperson: Lisa Loftis
Address: 113 Lawrence Hall
Phone: 320.308.4141
Email: forl@stcloudstate.edu
Website: www.stcloudstate.edu/forl

BA - German *(36 credits)*

- Admission RequirementsThis major requires either one year in a single foreign language [other than German] OR a minor.

Notes

- Please see the Languages and Cultures Placement Guidelines on the program website.
- This program currently is not accepting new students.

Program Requirements

GER 201, GER 202 (where necessary), GER 220, GER 301, GER 302, GER 450, GER 457.

Electives

15 credits at 300 or 400 level. Students may take 3 credits outside the program in courses with a clear German focus (e.g. History, Philosophy, Art History), with prior permission of major advisor. This major requires either one year in a single language [other than German or English] OR a minor.

BA programs in French, German, or Spanish satisfy the University's Upper Division Writing Requirement by receiving departmental approval of their writing portfolio with a grade of C or better.

Program Student Learning Outcomes

- Speaking at the Intermediate-High level on the ACTFL scale.
- Writing at the Intermediate-High level on the ACTFL scale.
- Listening at the Intermediate-High level on the ACTFL scale.
- Reading at the Intermediate-High level on the ACTFL scale.

BS - German *(40 credits)*

Admission Requirements

- GPA: Minimum of 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- See Languages and Cultures Department teaching methodology instructors for licensure requirements.
- This program currently is not accepting new students.

Program Requirements

GER 201, GER 202, GER 220, GER 301, GER 302, GER 450, GER 454; FORL 453, FORL 455.

Electives

Students fulfill the University's Upper Division Writing Requirement by demonstrating Intermediate-high proficiency level according to the ACTFL guidelines through certified testing, as required by the Board of Teaching requirements.

Program Student Learning Outcomes

- Understand language as a system.
- Understand first and second language acquisition theory and how this informs practice.
- Demonstrate intermediate-high level speaking proficiency as defined in the ACTFL Proficiency Guidelines established by the American Council on the Teaching of Foreign Languages.
- Comprehend, interpret, and evaluate information received in the target language through reading and listening at the level that results from demonstrating the speaking proficiency.
- Use familiar topics to write narratives and descriptions of a factual nature or routine correspondence consisting of several paragraphs at a level understandable to a native speaker of the target language.

Minor - German *(22 credits)*

Program Requirements

GER 201, GER 202, GER 220, GER 301, GER 302.

Electives

6 credits at 300 or 400 level.

Program Student Learning Outcomes

- Intermediate level language skills in listening, speaking, reading and writing.
- Students completing a German minor will demonstrate Inter/cultural Competence.
- Students completing a German minor will have a foundational knowledge of German/ language as a system
- Students completing a German minor will have a foundational knowledge of culture in German speaking countries.

Spanish BA, BS, and Minor

Languages and Cultures

Chairperson: Lisa Loftis
Address: 113 Lawrence Hall
Phone: 320.308.4141
Email: forl@stcloudstate.edu
Website: www.stcloudstate.edu/forl

BA - Spanish *(37 credits)*

Admission Requirements

- GPA: 2.3
- This major requires either one year in a single foreign language [other than Spanish or English] OR a minor.

Notes

- Please see the Languages and Cultures Placement Guidelines on the program website.

Program Requirements

(31 credits) SPAN 201, SPAN 202, SPAN 221 or SPAN 222, SPAN 310, SPAN 331, SPAN 341, SPAN 345, SPAN 457, SPAN 421 or SPAN 422, SPAN 441 or SPAN 445.

Electives

6 credits at 300-400 level, among which 3 credits may come from another department, with prior approval of major advisor.

BA majors in Spanish satisfy the University's Upper Division Writing Requirement by receiving a B- or better in SPAN 421, SPAN 422, SPAN 441, SPAN 445, SPAN 447 or SPAN 457.

Program Student Learning Outcomes

- Students will achieve an advanced low level of Spanish language skills. They will be able to communicate effectively with native speakers and interact with them in Spanish.
- Students will be able to demonstrate an understanding of the history, geography, customs and cultures of the Spanish-speaking world and the varied groups that speak Spanish.
- Students will be able to demonstrate an understanding and appreciation for different forms of cultural expression in

Spanish, including art, literature, music, film, forms of dress, customs, food, etc.
- Students will be able to successfully navigate the Spanish-speaking world and articulate their relationship to it.
- Identify, describe and analyze (a) cultural, social or literary issue(s) pertaining to the culture in Spanish-speaking countries in a research paper that demonstrates at least advanced low level of written proficiency according to the ACTFL scale.
- Evaluate their own language with regard to grammar, stylistics and pragmatics, and accurately communicate the interrelationships of language and culture and understand that cultural knowledge and understanding are interdisciplinary.
- Understand first and second language acquisition theory and how this informs practice.
- Demonstrate advanced-low level speaking proficiency as defined in the ACTFL Proficiency Guidelines established by the American Council on the Teaching of Foreign Languages.
- Comprehend, interpret, and evaluate information received in the target language through reading and listening at the level that results from demonstrating the speaking proficiency.
- Comprehend, interpret, and evaluate information received in the target language through reading and listening at the level that results from demonstrating the speaking proficiency.

BS - Spanish *(44 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- See Languages and Cultures Department B.S. advisors for licensure requirements.

Program Requirements

43 credits: SPAN 201, SPAN 202, SPAN 221 or SPAN 222, SPAN 310, SPAN 331, SPAN 341, SPAN 345, SPAN 453, SPAN 454; LC 461, LC 462; ENGL 361. Either SPAN 421 or SPAN 422 and either SPAN 441 or SPAN 445.

Electives

All 400-level Spanish courses fulfill the upper-division writing requirement. A 400-level Spanish course is offered every semester. See department for list of courses and when they will be offered.

Program Student Learning Outcomes

- Understand language as a system.

Minor - Spanish *(23 credits)*

Program Requirements

23 credits: SPAN 201, SPAN 202, SPAN 221 or SPAN 222, SPAN 310, SPAN 331, SPAN 341, SPAN 345.

Liberal Studies

BES

Liberal Studies

Director: Please contact the Advising and Student Transitions Office
Address: 366 Centennial Hall
Phone: 320.308.6075
Website:
www.stcloudstate.edu/programs/bachelor-elective-studies/details.aspx

BES - Liberal Studies *(120 credits)*

Admission Requirements

- GPA: 2.0
- Completion of the program proposal form. A major or minor is not required, but strongly encouraged. See list of majors/minors.

Program Requirements

Completion of the Liberal Education program. Completion of a minimum of 120 credits with at least a 2.0 grade point average. No more than 60 credits in one academic discipline. St. Cloud State

residency requirement of 30 semester credits. St. Cloud State residency requirement of 30 semester credits.

Electives

Obtained at least 40 credits of upper division (300-400) level courses. A maximum of six internship credits may be used as part of the 40 credits at the upper division level. Additional internship credits may still be used as electives toward graduation.

Management and Entrepreneurship

BS and Minor

Management and Entrepreneurship

Chairperson: Mike Pesch
Address: 439 Centennial Hall
Phone: 320.308.3225
Email: management@stcloudstate.edu
Website: www.stcloudstate.edu/management

BS - Management *(79 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements

Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341. Management Major required courses (12 credits): MGMT 352, MGMT 365, MGMT 467, and MGMT 470.

Electives

Select four courses (12 credits): MGMT 344, MGMT 364, MGMT 444, MGMT 450, MGMT 451, MGMT 452, MGMT 453, MGMT 462, MGMT 483, MGMT 484, MGMT 485, MGMT 486, MGMT 498; BLAW 436, BLAW 438; CMST 330; ECON 417, ECON 471, ECON 474; FIRE 373, FIRE 375, FIRE 378, FIRE 386, FIRE 474, FIRE 475, FIRE 476, FIRE 479, FIRE 480; IS 301, IS 450, IS 454, IS 460, PSY 270, PSY 360; SOC 456. At least 3 of the 4 courses must be MGMT. If a Speech course is taken for elective credit, it may not be used to fulfill the Herberger Business School communication requirement.

Students fulfill the University's Upper Division Writing Requirement by successfully completing MGMT 467.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present

defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Management majors will describe the roles of managers; demonstrate knowledge of motivation theories and leadership theories; identify and define human resource activities and their role in organizations; understand the structure, processes, and outcomes of organizations; and compare and contrast management practices across cultures and countries.

BS - Management - Global Business Concentration *(79 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.
- The Global Business concentration requires certification of a threshold level of competence in one foreign language. This level can be attained by satisfactorily completing one year of 200-level sequence of courses or by passing an examination administered through the Languages and Cultures Department, which will provide a certificate of competence to the Office of Records and Registration prior to graduation.

Program Requirements

Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341. Management Major-Global Business Concentration required courses (24 credits): MGMT 352, MGMT 365, MGMT 467, MGMT 470, MKTG 416, FIRE 473, ECON 474, and either HBS 410 or HBS 479 or other credit bearing international experience as approved by advisor.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing MGMT 467.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present

defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. International business majors will examine the determination and effects of exchange rates on international trade and financial flows; examine and evaluate the risks of foreign investment, foreign exchange exposures, and interest rate risk - international business majors will evaluate the use of hedging tools to manage the risks; examine the impact of culture on consumer behavior and marketing practices; compare and contrast management practices across cultures and countries; and will examine the history, politics, geography, and sociology of a region of the world.

BS - Management - Human Resources Concentration *(79 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements

Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341. Management Major-Human Resources required courses (24 credits): MGMT 352, MGMT 365, MGMT 467, MGMT 470, MGMT 450, MGMT 451, MGMT 452, MGMT 453.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing MGMT 467.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Management majors will describe the roles of managers; demonstrate

knowledge of motivation theories and leadership theories; identify and define human resource activities and their role in organizations; understand the structure, processes, and outcomes of organizations; and compare and contrast management practices across cultures and countries.

BS - Management - Operations Management Concentration *(79 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements

Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341. Management Major-Operations Management Concentration required courses (24 credits): MGMT 352, MGMT 365, MGMT 467, MGMT 470, MGMT 483, MGMT 484, MGMT 485, MGMT 486.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing MGMT 467.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Management majors will describe the roles of managers; demonstrate knowledge of motivation theories and leadership theories; identify and define human resource activities and their role in organizations; understand the structure, processes, and outcomes of organizations; and compare and contrast management practices across cultures and countries.

BS - Entrepreneurship *(88 credits)*

Admission Requirements

- GPA: 2.65

- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206 and IS 242 or STAT 242.
- Grade of C- or better in ENTR 200, ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements
49 Credits: Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341. Entrepreneurship Major Required Courses (27 Credits): ENTR 200, ENTR 305, ENTR 335, ENTR 364, ENTR 490, FIRE 372, MGMT 352, MKTG 322, and either MGMT 444 or MGMT 498.

Electives
Select 6 Credits from: IS 356; MGMT 365 MGMT 450, MGMT 452; MGMT 462, MGMT 485, MGMT 486; MKTG 321, MKTG 402, MKTG 403, MKTG 404, MKTG 411, MKTG 413, MKTG 415 MKTG 416, MKTG 419, MKTG 420, MKTG 425, MKTG 426, MKTG 429; ACCT 371, ACCT 451.

Students fulfill the University's Upper Division Writing Requirement by successfully completing ENTR 364.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Our students will be competent in their respective disciplines/majors. Objectives for this goal are different for each major. Entrepreneurship majors will develop a complete business plan; identify the key roles of a small business manager/owner; describe factors of ethical and socially responsible behavior in small businesses; apply analytical techniques to small business situations; assess the global aspects of markets on small business; understand the process of new product/service/business development; identify and apply legal principles related to small business; and conduct and interpret market research.

Minor - Management - Business Majors *(15 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
MGMT 365

Electives
Four (4) 300-400 level MGMT courses (12 credits). Select from MGMT 352, MGMT 364, MGMT 450, MGMT 451, MGMT 452, MGMT 453, MGMT 462, MGMT 467, MGMT 470, MGMT 483, MGMT 484, MGMT 485, MGMT 486, MGMT 498

Minor - Global Business *(15 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
MKTG 416, ECON 474, FIRE 473, MGMT 470, and either HBS 410 or HBS 479 or other credit bearing international experience as approved by advisor.

Minor - Management - Non-Business Majors and BES *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
ACCT 291; MGMT 201; BLAW 235; MKTG 220

Electives
Four 300-400 level courses (12 credits). Select from MGMT 352, MGMT 364, MGMT 365, MGMT 450, MGMT 451, MGMT 452, MGMT 453, MGMT 462, MGMT 467, MGMT 470, MGMT 483, MGMT 484, MGMT 485, MGMT 486, MGMT 498. At least 3 of the courses must be from the MGMT department and all 4 electives must be from the Herberger Business School. One course may be from ACCT, BLAW, FIRE, IS, or MKTG with MGMT Minor Adviser approval.

Minor - Entrepreneurship - Non-Business *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.

Program Requirements
15 credits: ACCT 291, BLAW 235, MGMT 301, MKTG 320, ENTR 200.

Electives
Select 9 credits (no more than 2 courses from any subject area): ACCT 371, ACCT 482, IS 350, BLAW 433, BLAW 434, ENTR 305, ENTR 335, ENTR 364, ENTR 490, FIRE 372, MGMT 352, MGMT 365, MGMT 462, MGMT 470, MKTG 321, MKTG 322, MKTG 333, MKTG 402, MKTG 403, MKTG 404, MKTG 411, MKTG

413, MKTG 415 MKTG 416, MKTG 419, MKTG 420, MKTG 425, MKTG 426, MKTG 429.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Minor - Entrepreneurship-BES *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.

Program Requirements
15 credits: ACCT 291, BLAW 235, MGMT 201, MKTG 220, ENTR 200.

Electives
Select 9 credits (no more than 2 courses from any subject area): ACCT 371, ACCT 482, IS 350, BLAW 433, BLAW 434, ENTR 305, ENTR 335, ENTR 364, ENTR 490, FIRE 372, MGMT 352, MGMT 365, MGMT 462, MGMT 470, MKTG 321, MKTG 322, MKTG 333, MKTG 402, MKTG 403, MKTG 404, MKTG 411, MKTG 413, MKTG 415 MKTG 416, MKTG 419, MKTG 420, MKTG 425, MKTG 426, MKTG 429.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Minor - Global Business Minor for Non-Business Majors *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only students admitted to a major and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
ACCT 291, MGMT 201, BLAW 235, MKTG 220, FIRE 371

Electives
Three (3) 300-400 electives selected from the following list: MGMT 470, BLAW 437, MKTG 416, ECON 474 or FIRE 473, HBS 410 or HBS 479 or other credit bearing international experience as approved by advisor.

Marketing

BS and Minor

Marketing

Chairperson: Dennis Bristow
Address: 462 Centennial Hall

Phone: 320.308.2057
Email: mkbl@stcloudstate.edu
Website: www.stcloudstate.edu/mkbl

BS - Marketing *(82 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242 and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements

Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341. Marketing Major Required Courses (21 credits): MKTG 321, MKTG 322, MKTG 402, MKTG 403, MKTG 404, MKTG 415, BLAW 433.

Electives

(6 credits) Marketing Major Electives Select 2 of the following: MKTG 344 or MKTG 444, MKTG 411, MKTG 416, MKTG 419, MKTG 420, MKTG 425, MKTG 426, MKTG 498. With approval of adviser, 3 credits of non-MKTG courses may be used as part of the 6 elective credits. Up to 3 credits for MKTG 344 or MKTG 444 may be used as elective credits.

Students fulfill the University's Upper Division Writing Requirement by successfully completing MKTG 404.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators. Students will communicate a business idea using appropriate organization, expression, and mechanics; write competently in their disciplines (assessed in required major courses); and make an effective business presentation.
- Our students will be competent problem solvers. Students will prepare and defend an effective solution to a business case or problem.
- Our students will be effective collaborators. Students will effectively contribute to the completion of group tasks; responsibly fulfill their role(s) in the group; and cooperate with and value the viewpoints of other group members.
- Our students will be competent in the business core. Students will demonstrate understanding of and apply core disciplinary concepts in business; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- Marketing majors will demonstrate knowledge of the marketing concept, and will be able to apply the strategic marketing process to solve marketing problems, including: assessing the situation facing the decision maker (culminating in a SWOT chart); segmenting and targeting markets, and positioning product offerings accordingly; and selecting and justifying marketing mix strategies in: product and price, promotion, and distribution. Marketing majors will be able to collect, analyze and interpret information relevant to marketing decision making; demonstrate effective written communication skills applied to the marketing discipline, including writing effective marketing plans; deliver professional presentations, including

sales presentations; and understand the fundamental legal and ethical implications of marketing actions.

BS - General Business *(82 credits)*

Admission Requirements

- GPA: 2.65
- 40 earned credits (from courses numbered 100 or higher)
- (14 credits) These courses must be completed before admittance to HBS Upper Division Status: ACCT 291, CMST 192, ENGL 191, HBS 111, and MATH 112 or MATH 196.
- (19 credits) These courses must be completed or enrolled in before admittance to HBS Upper Division Status: ACCT 292, BLAW 235, CSCI 169 or CNA 169, ECON 205, ECON 206, and IS 242 or STAT 242.
- Grade of C- or better in ACCT 291, CSCI 169 or CNA 169, IS 242 or STAT 242, and MATH 112 or MATH 196.

Notes

- Only business majors with HBS Upper Division Status or admitted business minors may enroll in 300 and 400 level Business School courses. Department permission required for all other students.
- Some of the required courses will count in the Liberal Education Program.

Program Requirements
Business Core (22 credits): HBS 211, FIRE 371, IS 340, MGMT 201, MGMT 383, MGMT 497, MKTG 220, MKTG 333 or ENGL 332 or CMST 341

Electives
Select 27 credits from 300-400 level courses from at least three of the following nine areas: Accounting (12 credits max); Business Law (12 credits max); Finance (12 credits max); Information Systems (12 credits max); Insurance (12 credits max); Management (12 credits max); Marketing (12 credits max); Real Estate (12 credits max); Economics and/or other departments outside the Business School (3 credits max).

Students fulfill the University's Upper Division Writing Requirement by successfully completing MKTG 333.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Minor - Marketing: Business Majors *(15 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
MKTG 321, MKTG 322.

Electives
9 credits from 300/400 level MKTG or BLAW courses in consultation with advisor.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Minor - Marketing: Non-Business Majors *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
ACCT 291; BLAW 235; MGMT 201; MKTG 220.

Electives
12 elective credits from 300/400 level MKTG or BLAW courses in consultation with advisor.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Minor - General Business-BES *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.
- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
ACCT 291; BLAW 235; MGMT 201; MKTG 220.

Electives
OPTION 1: MKTG 100 and 9 elective credits from 300/400 level. Herberger Business School courses (no more than 6 credits from any one of the following eight areas: (1) accounting; (2) information systems; (3) business law; (4) finance; (5) insurance; (6) management; (7) marketing; (8) real estate.
OPTION 2: 12 elective credits from 300/400 level Herberger Business School courses (no more than 6 credits from any one of the following eight areas: 1) accounting; 2) information systems; 3) business law; 4) finance; 5) insurance; 6) management; 7) marketing; 8) real estate.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Minor - Marketing-BES *(24 credits)*

Admission Requirements

- GPA: 2.65
- Admitted to a major

Notes

- Non-business majors who elect to minor in business may take no more than 30 credits of their total university work in the Herberger Business School.

- Only students admitted to a business major or minor program and who have completed 60 semester credits (junior standing) may enroll in 300 and 400 level courses. Department permission required for all other students.

Program Requirements
ACCT 291; BLAW 235; MGMT 201; MKTG 220.

Electives
12 elective credits from 300/400 level MKTG or BLAW courses in consultation with advisor.

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Certificate

Marketing
Chairperson: Dennis Bristow
Address: 462 Centennial Hall
Phone: 320.308.2057
Email: mkbl@stcloudstate.edu
Website: www.stcloudstate.edu/mk

Certificate - Professional Selling Skills *(15 credits)*
Program Requirements
MKTG 320, MKTG 333, MKTG 415, MKTG 425, MKTG 426

Program Student Learning Outcomes

- Our students will be effective written and oral communicators.
- Our students will be competent problem solvers.
- Our students will be effective collaborators.
- Our students will be competent in the business core.
- Our students will be competent in their respective disciplines/majors.

Mass Communications BS

Mass Communications BS

Mass Communications
Chairperson: Dale Zacher
Address: 125 Stewart Hall
Phone: 320-308-3293
Email: masscommunications@stcloudstate.edu
Website: www.stcloudstate.edu/masscommunications

BS - Mass Communications: Creative Media Production *(44-46 credits)*
Notes

- Mass Communications majors must complete a minor or complete two college courses (8 credits) in a single foreign language as part of their degree.

Program Requirements
Core (19 Credits): MCOM 200, MCOM 203, MCOM 207, MCOM 300, MCOM 400, MCOM 495, MCOM 498; Creative Media Production Core (15-16 Credits): MCOM 315, MCOM 320, MCOM 330, Choose two of four: MCOM 325, MCOM 415, MCOM 420, MCOM 335; UDWR (4 Credits): ENGL 331 or ENGL 333 or ENGL 341

Electives
(6-7 Credits): Choose two courses: MCOM 338, MCOM 340, MCOM 345, MCOM 350, MCOM 370, MCOM 414, MCOM 444

Upper Division Writing Requirement will be fulfilled by any of the following courses ENGL 331 or ENGL 333 or ENGL 341

BS - Mass Communications: Journalism *(46 credits)*
Notes

- Mass Communications majors must complete a minor or complete two college courses (8 credits) in a single foreign language as part of their degree.

Program Requirements
Core (23 Credits): MCOM 200, MCOM 203, MCOM 207, MCOM 300, MCOM 400, MCOM 495, MCOM 498; ENGL 331 or ENGL 333 or ENGL 341; Journalism Core (10 Credits): MCOM 340, MCOM 350, MCOM 440

Electives
(13 Credits): Choose four courses: MCOM 260, MCOM 320, MCOM 330, MCOM 345, MCOM 365, MCOM 370, MCOM 414, MCOM 444

ENGL 331 or ENGL 333 or ENGL 341

BS - Mass Communications: Strategic Communications *(42-43 credits)*

Notes

- Mass Communications majors must complete a minor or complete two college courses (8 credits) in a single foreign language as part of their degree.

Program Requirements
Core (19 Credits): MCOM 200, MCOM 203, MCOM 207, MCOM 300, MCOM 400, MCOM 495, MCOM 498; Strategic Communication Core (18 Credits): MCOM 260 and MCOM 360 and MCOM 365 and MCOM 370, MCOM 375 and MCOM 480 or MCOM 485.

Electives
(5-6 Credits): Choose two courses: MCOM 330, MCOM 340, MCOM 380, MCOM 385, MCOM 444

MCOM 375 satisfies the upper division writing requirement.

Mass Communications MS

Mass Communications

Chairperson: Dale Zacher
Address: 125 Stewart Hall
Phone: 320.308.3293
Email: masscommunications@stcloudstate.edu
Website:
www.stcloudstate.edu/masscommunications

MS - Mass Communications - Strategic Media Communications *(33-35 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.

Plan B
Option(s): Comprehensive Exam
Credits: 33-35
Core: 21 credits: MCOM 601, MCOM 605, MCOM 632, MCOM 621, MCOM 634, MCOM 652, MCOM 686
Electives: 12-14 credits. Select 2 from the following (at least one course must be at the 600 level): MCOM 580, MCOM 585, MCOM 603, MCOM 604, MCOM 630, MCOM 635, MCOM 646, MCOM 670. Select two additional graduate courses outside the program in consultation with advisor.
Research:

Minor

Mass Communications

Chairperson: Dale Zacher
Address: 125 Stewart Hall
Phone: 320.308.3293
Email: masscommunications@stcloudstate.edu
Website:
www.stcloudstate.edu/masscommunications
Faculty: Mass Communications

Minor - Mass Communications *(18-20 credits)*

Program Requirements
MCOM 200

Electives
5 elective mass communications courses in consultation with a mass communications advisor.

Program Student Learning Outcomes

- Demonstrate an understanding of the ethical principles that guide media content.
- Apply the laws of free speech and the First Amendment in a democracy.
- Demonstrate an understanding of the significance and impact of mass communications in a global society.
- Identify and apply multimedia concepts, standards, practices, and skills to a chosen professional field.

- Conduct research by methods appropriate to the communications professions and assess numerical, statistical, and other information for accuracy.
- Think critically, creatively, and independently.
- Demonstrate basic skills for effective written, oral, and visual communication.
- Demonstrate sensitivity to ethnicity, race, and culture, and understanding of racism and the diversity of groups in a global society, and a comprehension of the importance of diversity and inclusiveness in relationship to mass communications.

Masters of Business Administration

MBA

Master of Business Administration

MBA Program Director: Brandon Johnson
Address: 118 Centennial Hall
Phone: 320.308.3212
Email: mba@stcloudstate.edu**Website:** www.stcloudstate.edu/graduate/mba/default.aspx

MBA - Master of Business Administration *(36 credits)*

- Admission RequirementsUndergraduate GPA of 2.75
- GMAT score of 470 or better
- Resume required

Notes

- This program is offered in St. Cloud and Plymouth and 100% Online.
- The Plymouth and Online program are cohort-based and part-time only.

Program Requirements
(30 credits) MBA 601, MBA 611, MBA 612, MBA 613 or MBA 614, MBA 615, MBA 616, MBA 617, MBA 618, MBA 696.

Electives
(6 credits) Choose 3 credits from Professional Development: MBA 652, MBA 653, MBA 654, MBA 655, MBA 656, MBA 657. Choose 3 credits from Specialty Electives: MBA 681, MBA 600, MBA 605, MBA 644, MBA 690.

Program Student Learning Outcomes

- MBA graduates will be professional communicators. Students will write competently in multiple business settings; make an effective formal business presentation; and participate effectively in group discussions.
- MBA graduates will be effective decision makers. Students will prepare a written solution to a business case using multi-disciplinary knowledge; recognize ethical problems and present defensible ethical solutions; and apply global perspectives to business situations.
- MBA graduates will be leadership oriented. Students will become aware of leadership theories and practices.

Master of Engineering Management

Executive Engineering Management, St. Paul

Master of Engineering Management

Chairperson: Ben Baliga
Address: Twin Cities Graduate Center
Phone: 320.308.3843
Email: emem@stcloudstate.edu or brbaliga@stcloudstate.edu
Website: www.stcloudstate.edu/emem

- Executive Masters of Engineering Management (EMEM), St. Paul *(33 credits)*

- Admission RequirementsMinimum of 5 years experience after completion of an undergraduate degree.
- Undergraduate GPA of 3.00 or above.
- The GRE is not required.

Notes

- Program is normally completed over 18 months in a cohort basis.
- The program includes an international business tour. Students who are unable to tour must find an alternative project in consultation with their adviser.

Plan B
Option(s): Capstone
Credits: 33
Core: 30 credits: EM 650, EM 660, EM 653, EM 664, EM 652, EM 661, EM 662, EM 665, EM 656, EM 658.
Electives:
Research: 3 credits: EM 670 or EM 696

Program Student Learning Outcomes

- The ability to apply knowledge of mathematics, science, and engineering to design and problem solving.
- The ability to design and conduct experiments, as well as to analyze and interpret data related to manufacturing engineering.
- The ability to select, improve, and design processes, components and systems to meet desired needs.
- The ability to function in multi-disciplinary and cross-functional teams.
- The ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility and the ability to communicate effectively.
- An understanding of the competitive and integrated nature of the manufacturing environment.
- The broad education necessary to understand the social, economic, environmental, and global impact of engineering solutions and a recognition of the need, and an ability to engage in life-long learning.
- A knowledge of contemporary issues as they relate to the practice of mechanical and manufacturing engineering.
- An ability to use the techniques, skills, and modern engineering tools necessary for mechanical and manufacturing engineering practice.

MEM - Engineering Management, Plymouth *(30-33 credits)*

Admission Requirements

- GPA: 3.0
- The GRE is required.
- A Baccalaureate degree in engineering or technology or a closely related field from an accredited institution is required.

Notes

- The Engineering Management graduate program is only offered in Plymouth. Engineering Management is a program in the Mechanical and Manufacturing Engineering Department.

Plan A
Option(s): Thesis
Credits: 30
Core: 15 credits: EM 560, EM 660, EM 663, EM 664, EM 632
Electives: Select 9 credits from the following: ETS 604, FIRE 577, MGMT 567, MGMT 570, MGMT 584, MGMT 586, EM 561, EM 638, EM 661, EM 662, EM 665, EM 666, EM 667, MBA 629, MBA 636, MBA 667, COMM 534, BLAW 535
Research: Minimum of 6 credits: EM 699

Plan B
Option(s): Capstone
Credits: 33
Core: 15 credits: EM 560, EM 660, EM 663, EM 664, EM 632
Electives: Select 15 credits from the following: ETS 604, FIRE 577, MGMT 567, MGMT 570, MGMT 584, MGMT 586, EM 561, EM 638, EM 661, EM 662, EM 665, EM 666, EM 667, MBA 629, MBA 636, MBA 667, COMM 534, BLAW 535
Research: 3 credits: EM 670

Program Student Learning Outcomes

- The ability to apply knowledge of mathematics, science, and engineering to design and problem solving.
- The ability to design and conduct experiments, as well as to analyze and interpret data related to manufacturing engineering.

- The ability to select, improve, and design processes, components and systems to meet desired needs.
- The ability to function in multi-disciplinary and cross-functional teams.
- The ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility and the ability to communicate effectively.
- An understanding of the competitive and integrated nature of the manufacturing environment.
- The broad education necessary to understand the social, economic, environmental, and global impact of engineering solutions and a recognition of the need, and an ability to engage in life-long learning.
- A knowledge of contemporary issues as they relate to the practice of mechanical and manufacturing engineering.
- An ability to use the techniques, skills, and modern engineering tools necessary for mechanical and manufacturing engineering practice.

Master of Public Administration

Master of Public Administration

Master of Public Administration

Chairperson: Steven Wagner
Address: 328 - 51 Building
Phone: 320.308.2462
Email: publicadministration@stcloudstate.edu
Website: www.stcloudstate.edu/mpa

MPA - City and County Leadership and Management *(37-39 credits)*

Admission Requirements

- GPA: 2.75
- Pre-service and in-service students must have a Baccalaureate degree from an accredited institution.
- Pre-service and in-service students must submit an essay. See Department website for details.
- The GRE is required for pre-service students. In-service students are not required to submit GRE scores. International students are required to take the Test of English as a Foreign Language (TOEFL).
- In-service students: Resume outlining professional experiences.
- Pre-service students: Three letters of recommendation from academic or professional sources. In-service students: Three letters of recommendation from professional sources that describe probabilities of graduate education success and sincerity of commitment to an interest in a career or career advancement in public administration. See departmental website for details.

Notes

- Internship is required for pre-service students.
- See department website for required capstone project details.

Plan B
Option(s): Capstone
Credits: 37-39
Core: Required courses (31 credits): MPA 600, MPA 601, MPA 602, MPA 603, MPA 604, MPA 605, MPA 606, MPA 607, MPA 620, MPA 621, MPA 690.
Electives: Electives (6-8 credits): Students select two courses from MPA 623; MPA 624; MPA 625; MPA 626; ACCT 584; CMTY 564; ECON 560; ECON 561; GEOG 557; GEOG 654. ECON and ACCT courses have pre-requsites that do not count toward the MPA. Pre-service students must also take MPA 644.
Research: MPA 690 (1 credit).

MPA - Health Care Leadership and Management *(37-39 credits)*

Admission Requirements

- GPA: 2.75
- Pre-service and in-service students must have a Baccalaureate degree from an accredited institution.
- Pre-service and in-service students must submit an essay. See Department website for details.
- The GRE is required for pre-service students. In-service students are not

required to submit GRE scores. International students are required to take the Test of English as a Foreign Language (TOEFL).
- In-service students: Resume outlining professional experiences.
- Pre-service students: Three letters of recommendation from academic or professional sources. In-service students: Three letters of recommendation from professional sources that describe probabilities of graduate education success and sincerity of commitment to an interest in a career or career advancement in public administration. See departmental website for details.

Notes

- Internship is a prerequisite required by the Minnesota State Board of Nursing Home Administrators (BEHNA) for students to take the State and National Licensure Examinations and serve as an administrator of a licensed nursing home in Minnesota.
- See department website for required capstone project details.

Plan B
Option(s): Capstone
Credits: 37-39
Core: Required courses (37 credits): MPA 600, MPA 601, MPA 602, MPA 603, MPA 604, MPA 605, MPA 606, MPA 607, MPA 660, MPA 661, MPA 634, GERO 630; MPA 690.
Electives: Electives (2 credits): Students may take MPA 644 as an elective. See Department website for details regarding MPA 644 and Minnesota requirements to serve as an administrator of a Minnesota Licensed administrator.
Research: MPA 690 (1 credit).

MPA - International Development Leadership and Management *(37-40 credits)*

Admission Requirements

- GPA: 2.75
- Pre-service and in-service students must have a Baccalaureate degree from an accredited institution.
- Pre-service and in-service students must submit an essay. See Department website for details.
- The GRE is required for pre-service students. In-service students are not required to submit GRE scores. International students are required to take the Test of English as a Foreign Language (TOEFL).
- In-service students: Resume outlining professional experiences.
- Pre-service students: Three letters of recommendation from academic or professional sources. In-service students: Three letters of recommendation from professional sources that describe probabilities of graduate education success and sincerity of commitment to an interest in a career or career advancement in public administration. See departmental website for details.

Notes

- Internship is required for pre-service students.
- See department website for required capstone project details.

Plan B
Option(s): Capstone
Credits: 37-40
Core: Required courses (31 credits): MPA 600, MPA 601, MPA 602, MPA 603, MPA 604, MPA 605, MPA 606, MPA 607, MPA 650, MPA 651, MPA 690.
Electives: Electives (6-9 credits): Students select two courses from MPA 654; MPA 655; MPA 656; MPA 657; MPA 658; ECON 574*; ECON 645; MPA 624; POL 554*; PSEL 640*. ECON 574, POL 554, PSEL 640 have pre-requsites that do not count toward the MPA. Pre-service students may take MPA 644 as an elective.
Research: MPA 690 (1 credit).

MPA - Nonprofit Leadership and Management *(37-39 credits)*

Admission Requirements

- GPA: 2.75

- Pre-service and in-service students must have a Baccalaureate degree from an accredited institution.
- Pre-service and in-service students must submit an essay. See Department website for details.
- The GRE is required for pre-service students. In-service students are not required to submit GRE scores. International students are required to take the Test of English as a Foreign Language (TOEFL).
- In-service students: Resume outlining professional experiences.
- Pre-service students: Three letters of recommendation from academic or professional sources. In-service students: Three letters of recommendation from professional sources that describe probabilities of graduate education success and sincerity of commitment to an interest in a career or career advancement in public administration. See departmental website for details.

Notes

- Internship is required for pre-service students.
- See department website for required capstone project details.

Plan B
Option(s): Capstone
Credits: 37-39
Core: Required courses (31 credits): MPA 600, MPA 601, MPA 602, MPA 603, MPA 604, MPA 605, MPA 606, MPA 607, MPA 630, MPA 631, MPA 690.
Electives: Electives (6-8 credits): Students select two courses from MPA 632; MPA 633; MPA 634; ACCT 584; CMTY 555; ECON 520; ECON 603. ECON and ACCT courses have pre-requsites that do not count toward the MPA. Pre-service students must also take MPA 644.
Research: MPA 690 (1 credit).

Mathematics & Statistics

Mathematics BA and Minor

Mathematics and Statistics

Chairperson: Keith Agre
Address: 139 Engineering & Computing Center
Phone: 320.308.3001
Email: mathstat@stcloudstate.edu
Website: www.stcloudstate.edu/mathstat

BA - Mathematics *(41-49 credits)*

Admission Requirements

- GPA: 2.0
- Completion of MATH 221 and MATH 222 and at least three program credits at SCSU.
- 2.4 GPA in all program courses.
- A student who fails or withdraws from three or more mathematics courses may be denied admission to the major.

Notes

- Students are required to complete one of the following: 1) a minor from the College of Science and Engineering or a minor from Economics or Information Systems; 2) the Philosophy Minor for Mathematics majors; 3) a second major; or 4) 12 additional credits in Mathematics or science that are approved by the Mathematics and Statistics Department.
- Students must earn at least a "C-" in all program courses.

Program Requirements
Basic (22 cr.): MATH 221, MATH 222, MATH 271, MATH 304, MATH 312, MATH 321. Differential Equations (3-4 cr.): MATH 325. MATH 327 may be substituted for MATH 325. Programming (3-7 cr.): MATH 252. CNA 267 or CSCI 201 may be substituted for MATH 252.

Electives
Core (4 cr.) (choose at least one course): MATH 411, MATH 421. A second Core Math Elective may be counted as a Supporting Math Elective. Supporting Math Electives (minimum 10 cr.) (choose three or four courses): MATH 252, MATH 353, MATH 423, MATH 427, MATH 452, MATH 455, MATH 465, MATH 480, STAT 447, STAT 448. MATH 252 satisfies the Programming requirement and also counts as a Supporting Math Electives.

Students fulfill the University's Upper Division Writing Requirement by successfully completing MATH 485 with a grade of "C-" or better.

Program Student Learning Outcomes

- Demonstrate mastery of a body of mathematical knowledge.
- Reason mathematically.
- Apply mathematics to solve problems using analytic, graphing and numerical methods.
- Communicate in the language of mathematics, both orally and in writing.
- Demonstrate an understanding of the breadth of mathematics and the connections between mathematics and other disciplines.
- Undertake individual, creative work.

Minor - Mathematics (BA) *(25-27 credits)*

Admission Requirements

- GPA: 2.0
- Completion of at least three program credits at SCSU.
- A student who fails or withdraws from three or more mathematics courses may be denied admission to the minor.

Notes

- Students must earn at least a "C-" in all program courses.

Program Requirements
MATH 221, MATH 222, MATH 312.

Electives
(Minimum 13 cr.) (choose four or five courses): MATH 252, MATH 271, MATH 304, MATH 321, MATH 325, MATH 353, MATH 411, MATH 421, MATH 423, MATH 427, MATH 452, MATH 455, MATH 465, MATH 480. MATH 320 may substitute for MATH 321, but it counts as only 3 credits towards the elective total. MATH 327 may substitute for MATH 325, but it counts as only 3 credits towards the elective total. At least six credits must be completed at SCSU, and at least one program course must be taken at the 400 level.

Program Student Learning Outcomes

- Demonstrate mastery of a body of mathematical knowledge.
- Reason mathematically.
- Apply mathematics to solve problems using analytic, graphing and numerical methods.
- Communicate in the language of mathematics, both orally and in writing.
- Demonstrate an understanding of the breadth of mathematics and the connections between mathematics and other disciplines.
- Undertake individual, creative work.

Mathematics BS

Mathematics and Statistics

Chairperson: Keith Agre
Address: 139 Engineering & Computing Center
Phone: 320.308.3001
Email: mathstat@stcloudstate.edu
Website: www.stcloudstate.edu/mathstat

BS - Mathematics Teaching *(53-54 credits)*

Admission Requirements

- GPA: 2.50
- GPA of 2.40 in all program courses.
- C or better in ENGL 191 and CMST 192.
- Completion of MATH 221, MATH 222, and at least three program credits at SCSU, completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU, and submission of scores on the MTLE.
- A student who fails or withdraws from three or more mathematics courses may be denied admission to the major.
- Must participate in a STEM Education Admissions Event to assess student skills in writing and oral communication as well as student dispositions.

Notes

- Students are urged to apply for admission as soon as they become eligible.

- All but one required mathematics course in the B.S. program must be completed prior to student teaching.
- A student who fails or withdraws from five or more mathematics classes may be dropped from the program.
- Students must earn at least a "C-" in all program courses.
- ED 431, IM 422, STEM 420 and MATH 431 are co-requisites. ED 421, ED 451, STEM 421 and MATH 432 are co-requisites.

Program Requirements
(47 cr.) MATH 221, MATH 222, MATH 271, MATH 304, MATH 312, MATH 321, MATH 411, MATH 421, MATH 431, MATH 432, MATH 465, MATH 482, STAT 447, STEM 420, STEM 421. MATH 431, STEM 420, MATH 432, STEM 421, and MATH 482 must be completed at St. Cloud State University.

Electives
(6-7 cr.) (choose two courses): MATH 252, MATH 325 or MATH 327, MATH 353, MATH 423, MATH 427, MATH 452, MATH 455, MATH 480, STAT 448.

To satisfy the upper division writing requirement, students must complete MATH 431 and 432 with grades of "C-" or better.

Program Student Learning Outcomes

- Demonstrate mastery of a body of mathematical knowledge.
- Reason mathematically.
- Apply mathematics to solve problems using analytic, graphing and numerical methods.
- Communicate in the language of mathematics, both orally and in writing.
- Demonstrate an understanding of the breadth of mathematics and the connections between mathematics and other disciplines.
- Undertake individual, creative work.
- Integrate an understanding of mathematics with an understanding of teaching.

Minor - Mathematics (BS) *(35 credits)*

Notes

- Students must earn at least a "C-" in all program courses.

Program Requirements
MATH 221, MATH 222, MATH 273, MATH 312, MATH 373, MATH 431, MATH 432, MATH 461, MATH 465, and STAT 447.

Minor - Middle School Mathematics *(27 credits)*

Admission Requirements

- GPA: 2.0
- GPA of 2.40 in all program courses
- Completion of at least three program credits at SCSU
- A student who fails or withdraws from three or more mathematics courses may be denied admission to the minor.

Notes

- Students are urged to apply for admission as soon as they become eligible.
- A student who fails or withdraws from five or more mathematics classes may be dropped from the program.
- Students must earn at least a "C-" in all program courses.
- Pending approval by the Minnesota Board of Teaching, this minor, along with SPED 203, CEEP 262, CEEP 361, ED 451 (or equivalent), and a four-week middle grades student teaching field experience, will fulfill the requirements for Minnesota middle grades mathematics licensure.

Program Requirements
MATH 201, MATH 301, MATH 221, MATH 222, MATH 271, MATH 304, MATH 431, STEM 420, STAT 239.

Specialization - Teaching Calculus *(9 credits)*

Program Requirements
MATH 421, MATH 423, MTHE 441.

Statistics BS and Minor

Mathematics and Statistics

Chairperson: Keith Agre
Address: 139 Engineering & Computing Center
Phone: 320.308.3001
Email: mathstat@stcloudstate.edu
Website: www.stcloudstate.edu/mathstat

BS - Statistics - Data Analytics Concentration *(45 credits)*

Admission Requirements

- GPA: 2.40
- GPA of 2.40 in all major courses.
- Completion of STAT 239, STAT 321, and three additional program credits.
- Completion of at least 3 program credits at SCSU.
- A student who fails or withdraws from three or more mathematics or statistics courses may be denied admission to the major.

Notes

- Students are required to complete one of the following: 1) a minor that requires at least 18 credits; or 2) a second major.
- Students must earn at least a "C-" in all major courses.
- Students must maintain at least a 2.40 GPA in the major to graduate.
- STAT 219, STAT 242, or STAT 353 may be substituted for STAT 239 with permission of advisor.

Program Requirements

Math (3 cr.): MATH 211. Computing (6 cr.): CNA 267, IS 443. Statistics (30 cr.): STAT 239, STAT 304, STAT 321, STAT 325, STAT 360, STAT 380, STAT 381, STAT 421, STAT 415, STAT 417.

Electives

6 credits of 300- or 400-level STAT courses not including STAT 353.

Students fulfill the University's Upper Division Writing Requirement by successfully completing STAT 381 with a grade of "C-" or better.

Program Student Learning Outcomes

- Will demonstrate an understanding of the theoretical underpinnings and assumptions of common statistical models.
- Will demonstrate an understanding of the theoretical underpinnings and assumptions of common statistical models.
- Will demonstrate an understanding of the theoretical underpinnings and assumptions of common statistical models.
- Will communicate statistical results effectively.

BS - Statistics - Data Science Concentration *(60 credits)*

Admission Requirements

- GPA: 2.40
- GPA of 2.40 in all major courses.
- Completion of STAT 239, STAT 321, and three additional program credits.
- Completion of at least 3 program credits at SCSU.
- A student who fails or withdraws from three or more mathematics or statistics courses may be denied admission to the major.

Notes

- Students must earn at least a "C-" in all major courses.
- Students must maintain at least a 2.40 GPA in the major to graduate.
- STAT 219, STAT 242, or STAT 353 may be substituted for STAT 239 with permission of advisor.

Program Requirements

Math (7 cr.): MATH 221, MATH 271. Computing (14 cr.): CNA 267, CSCI 201, CSCI 301, IS 443. Statistics (30 cr.): STAT 239, STAT 304, STAT 321, STAT 325, STAT 360, STAT 380, STAT 381, STAT 421, STAT 415, STAT 417.

Electives

9 credits of 300- or 400-level STAT courses not including STAT 353.

Students fulfill the University's Upper Division

Writing Requirement by successfully completing STAT 381 with a grade of "C-" or better.

Program Student Learning Outcomes

- Will demonstrate an understanding of the theoretical underpinnings and assumptions of common statistical models.
- Will demonstrate an understanding of the theoretical underpinnings and assumptions of common statistical models.
- Will demonstrate an understanding of the theoretical underpinnings and assumptions of common statistical models.
- Will demonstrate an understanding of the theoretical underpinnings and assumptions of common statistical models.

BS - Statistics - Mathematical Statistics Concentration *(57-59 credits)*

Admission Requirements

- GPA: 2.40
- GPA of 2.40 in all major courses.
- Completion of STAT 239, STAT 321, and three additional program credits.
- Completion of at least 3 program credits at SCSU.
- A student who fails or withdraws from three or more mathematics or statistics courses may be denied admission to the major.

Notes

- Students must earn at least a "C-" in all major courses.
- Students must maintain at least a 2.40 GPA in the major to graduate.
- STAT 219, STAT 242, or STAT 353 may be substituted for STAT 239 with permission of advisor.

Program Requirements

Math (18-19 cr.): MATH 221, MATH 222, MATH 271, MATH 312, and either MATH 321 or MATH 320. Programming (3-4 cr.): Choose one of the following: CNA 267, CSCI 201, or MATH 252. Statistics (27 cr.): STAT 239, STAT 304, STAT 321, STAT 325, STAT 380, STAT 381, STAT 421, STAT 447, STAT 448.

Electives

9 credits of 300- or 400-level STAT courses not including STAT 353 or STAT 417.

Students fulfill the University's Upper Division Writing Requirement by successfully completing STAT 381 with a grade of "C-" or better.

Program Student Learning Outcomes

- Use statistical software to manipulate data and analyze them descriptively and inferentially.
- Perform statistical procedures and interpret results for datasets with one or more variables.
- Use probability models and simulation to solve problems.
- Analyze data from well-designed experiments and surveys.

Minor - Statistics *(18 credits)*

Admission Requirements

- GPA: 2.0
- Completion of STAT 239.

Notes

- STAT 219, STAT 242, or STAT 353 may be substituted for STAT 239 with permission of advisor.
- Students may only count one of STAT 417 or STAT 447 toward the minor electives.
- Students must earn at least a "C-" in all minor courses.
- At least 9 credits must come from non-major courses.

Program Requirements

STAT 239, STAT 321.

Electives

12 credits of 300- or 400-level STAT courses not including STAT 353.

Minor - Applied Analytics *(21-22 credits)*

Admission Requirements

- GPA: 2.0
- Completion of an introductory statistics course: STAT 219, STAT 239, STAT 242, STAT 353, or IS 242.

Notes

- Students must earn at least a "C-" in all minor courses.
- Statistics majors may not receive this minor.

Program Requirements
(12-13 credits) One introductory statistics course (Choose from: STAT 219, STAT 239, STAT 242, STAT 353, or IS 242), STAT 321, CNA 302, CNA 303.

Electives
(9 credits) Select two courses from: STAT 304, STAT 325, STAT 360, STAT 415. Select three credits from an application area outside of STAT with approval of minor advisor.

Certificate - Actuarial Science *(15 credits)*

Notes

- Students must earn at least a B- in all five required classes.

Program Requirements
ECON 205, ECON 206, ACCT 291, FIRE 371, STAT 448

Applied Statistics MS

Mathematics and Statistics

Chairperson: Keith Agre
Address: 139 Engineering & Computing Center
Phone: 320.308.3001
Email: mathstat@stcloudstate.edu
Website: http://www.stcloudstate.edu/mathstat

Certificate - Teaching Calculus *(9 credits)*

- Admission RequirementsBS in teaching (licensure) mathematics or in teaching a science discipline such as Physics or Chemistry that has equivalent mathematics BS content

Program Requirements
MATH 521, MATH 523, MTHE 541

MS - Applied Statistics (Program Suspended) *(33 credits)*

- Admission RequirementsAdmission is currently suspended. The program is not accepting new applications.
- Fully qualified applicants for this degree must have completed the equivalent of the following undergraduate courses: STAT 229, STAT 321, MATH 221, MATH 222, MATH 321.
- Applicants deficient in one or more of these courses will be conditionally accepted, subject to satisfactory completion of these requirements.

Notes

- Statistical consulting is the practicum required for this program.

Plan A
Option(s): Thesis
Credits: 33
Core: 27 credit minimum: STAT 518, STAT 521, STAT 552, STAT 617, STAT 618, STAT 619, STAT 649, STAT 650. Choose one course: STAT 524, STAT 530, STAT 536. Chose one course: STAT 620, STAT 621.
Electives:
Research: STAT 699

Mechanical & Manufacturing Engineering

Mechanical and Manufacturing Engineering BS

Mechanical and Manufacturing Engineering

Chairperson: Kenneth Miller
Address: 101 Engineering & Computing Center
Phone: 320.308.5654
Email: mme@stcloudstate.edu
Website: www.stcloudstate.edu/mme

BS - Manufacturing Engineering *(109 credits)*

Admission Requirements

- GPA: 2.50
- Completion of GENG 101 or (GENG 103 and GENG 104), GENG 102, MME 243 or MME 244, ECE 201 or ENGR 332, MATH 221, MATH 222, MATH 327 or equivalent (e.g. MATH 325 and MATH 312), PHYS 234, PHYS 235, CHEM 210, Minimum 2.50 GPA within these required courses.

Notes

- Engineering students satisfy the Liberal Education Program as follows: Goal Areas 3, 4 and 9 are satisfied within the major.
- The remaining Goal Areas may be satisfied by: two goal Area 1 courses with one writing (4 credits) and one speech (3 credits); any one Goal Area 5 and two Goal Area 6 courses such that all are diversity, and two are dual-listed with Goal area 8, any one goal area 7 course flagged as racial issues. ECON 205 or ECON 206 is required and can be used for one of the courses in Goal Area 5.
- See department website for examples of fulfilling Liberal Education Requirements.

Program Requirements

GENG 101 or (GENG 103 and GENG 104), GENG 102, GENG 360, GENG 380; MME 201 or MME 202, MME 211 or MME 212, MME 224 or MME 225, MME 243 or MME 244, MME 334, MME 333, MME 342, MME 346, MME 352, MME 353, MME 461, MME 464, MME 470, MME 480, MME 481. CHEM 210; ECE 201 or ENGR 332; MATH 221, MATH 222, MATH 327 or equivalent (e.g. MATH 325 and MATH 312) and MATH 320 or equivalent (e.g. MATH 321 or PHYS 346); PHYS 234, PHYS 235; STAT 353 or STAT 417; ECON 205 or ECON 206; ETS 345.

Electives

(6 credits) Select 3 credits from the following MfgE technical electives: MGMT 383, MME 444. Others with adviser approval. Check prerequisites. Choose 3 credits from area technical electives: MME 404, MME 414, MME 420, MME 430, MME 440, MME 442, MME 450, MME 490, PHYS 333, PHYS 435, PHYS 460, ENGR 447, ECE 451. Check prerequisites.

Students fulfill the University's Upper Division Writing Requirement by successfully completing GENG 380.

Program Student Learning Outcomes

- The ability to apply knowledge of mathematics, science, and engineering to design and problem solving.
- The ability to design and conduct experiments, as well as to analyze and interpret data related to manufacturing engineering.
- The ability to select, improve, and design processes, components and systems to meet desired needs.
- The ability to function in multi-disciplinary and cross-functional teams.
- The ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility and the ability to communicate effectively.
- An understanding of the competitive and integrated nature of the manufacturing environment.
- The broad education necessary to understand the social, economic, environmental, and global impact of engineering solutions and a recognition of the need, and an ability to engage in life-long learning.
- A knowledge of contemporary issues as they relate to the practice of mechanical and manufacturing engineering.
- An ability to use the techniques, skills, and modern engineering tools necessary for mechanical and manufacturing engineering practice.

BS - Mechanical Engineering *(109 credits)*

Admission Requirements

- GPA: 2.50
- Completion of GENG 101 or (GENG 103 and GENG 104), GENG 102, MME 243 or MME 244, ECE 201 or ENGR 332, MATH 221, MATH 222, MATH 327 or equivalent (e.g. MATH 325 and MATH 312), PHYS 234, PHYS 235, CHEM 210. Minimum 2.50 GPA within these required courses.

Notes

- Engineering students satisfy the Liberal Education Program as follows: Goal Areas 3, 4 and 9 are satisfied within the major.
- The remaining Goal Areas may be satisfied by: two goal Area 1 courses with one writing (4 credits) and one speech (3 credits); any one Goal Area 5 and two Goal Area 6 courses such that all are diversity and two dual-listed with Goal 8; any one goal area 7 course flagged as racial issues; ECON 205 or ECON 206 is required and can be used for one of the courses in Goal Area 5.
- See department website for examples of fulfilling Liberal Education requirements.

Program Requirements

GENG 101 or (GENG 103 and GENG 104), GENG 102, GENG 360, GENG 380; MME 201 or MME 202, MME 211 or MME 212, MME 224 or MME 225, MME 243 or MME 244, MME 303, MME 333, MME 342, MME 346, MME 352, MME 353, MME 402, MME 480, MME 481; CHEM 210; ECE 201 or ENGR 332; MATH 221, MATH 222, MATH 327 or equivalent (e.g. MATH 325 and MATH 312) and MATH 320 or equivalent (e.g. MATH 321 or PHYS 346); PHYS 234, PHYS 235; STAT 353 or STAT 417; ECON 205 or ECON 206; ETS 345.

Electives

(9 credits) Select 3 credits from the following free technical electives: MATH 312, MATH 427, MATH 452, MATH 453; CHEM 211, CHEM 240, CHEM 320; PESS 249, PESS 448; PHYS 328; BIOL 202, BIOL 366. MME 444. Others with advisor approval. Check prerequisites. Select 6 credits from the following technical electives: MME 404, MME 414, MME 420, MME 430, MME 440, MME 442, MME 450, MME 490, PHYS 333, PHYS 435, PHYS 460, ENGR 447, ECE 451.

Students fulfill the University's Upper Division Writing Requirement by successfully completing GENG 380.

Program Student Learning Outcomes

- The ability to apply knowledge of mathematics, science, and engineering to design and problem solving.
- The ability to design and conduct experiments, as well as to analyze and interpret data related to manufacturing engineering.
- The ability to select, improve, and design processes, components and systems to meet desired needs.
- The ability to function in multi-disciplinary and cross-functional teams.
- The ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility and the ability to communicate effectively.
- An understanding of the competitive and integrated nature of the manufacturing environment.
- The broad education necessary to understand the social, economic, environmental, and global impact of engineering solutions and a recognition of the need, and an ability to engage in life-long learning.
- A knowledge of contemporary issues as they relate to the practice of mechanical and manufacturing engineering.
- An ability to use the techniques, skills, and modern engineering tools necessary for mechanical and manufacturing engineering practice.

Master of Engineering Management

Master of Engineering Management

Chairperson: Ben Baliga
Address: Twin Cities Graduate Center
Phone: 320.308.3843
Email: emem@stcloudstate.edu or brbaliga@stcloudstate.edu
Website: www.stcloudstate.edu/emem

- Executive Masters of Engineering Management (EMEM), St. Paul *(33 credits)*

- Admission RequirementsMinimum of 5 years experience after completion of an undergraduate degree.
- Undergraduate GPA of 3.00 or above.
- The GRE is not required.

Notes

- Program is normally completed over 18 months in a cohort basis.
- The program includes an international business tour. Students who are unable to tour must find an alternative project in consultation with their adviser.

Plan B
Option(s): Capstone
Credits: 33
Core: 30 credits: EM 650, EM 660, EM 653, EM 664, EM 652, EM 661, EM 662, EM 665, EM 656, EM 658.
Electives:
Research: 3 credits: EM 670 or EM 696

Program Student Learning Outcomes

- The ability to apply knowledge of mathematics, science, and engineering to design and problem solving.
- The ability to design and conduct experiments, as well as to analyze and interpret data related to manufacturing engineering.
- The ability to select, improve, and design processes, components and systems to meet desired needs.
- The ability to function in multi-disciplinary and cross-functional teams.
- The ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility and the ability to communicate effectively.
- An understanding of the competitive and integrated nature of the manufacturing environment.
- The broad education necessary to understand the social, economic, environmental, and global impact of engineering solutions and a recognition of the need, and an ability to engage in life-long learning.
- A knowledge of contemporary issues as they relate to the practice of mechanical and manufacturing engineering.
- An ability to use the techniques, skills, and modern engineering tools necessary for mechanical and manufacturing engineering practice.

MEM - Engineering Management, Plymouth *(30-33 credits)*

Admission Requirements

- GPA: 3.0
- The GRE is required.
- A Baccalaureate degree in engineering or technology or a closely related field from an accredited institution is required.

Notes

- This program is only offered in Plymouth.

Plan A
Option(s): Thesis
Credits: 30
Core: EM 560, EM 660, EM 663, EM 664, EM 632
Electives: Select 9 credits from the following: MME 570, ETS 604, FIRE 577, MGMT 567, MGMT 570, MGMT 584, MGMT 586, EM 638, EM 661, EM 662, EM 665, MBA 629, MBA 636, MBA 667, COMM 534, BLAW 535
Research: Minimum of 6 credits: EM 699

Plan B
Option(s): Capstone
Credits: 33
Core: EM 560, EM 660, EM 663, EM 664, EM 632
Electives: Select 15 credits from the following: MME 570, ETS 604, FIRE 577, MGMT 567, MGMT 570, MGMT 584, MGMT 586, EM 638, EM 661, EM 662, EM 665, MBA 629, MBA 636, MBA 667, COMM 534, BLAW 535
Research: EM 670

Program Student Learning Outcomes

- The ability to apply knowledge of mathematics, science, and engineering to design and problem solving.
- The ability to design and conduct experiments, as well as to analyze and

interpret data related to manufacturing engineering.
- The ability to select, improve, and design processes, components and systems to meet desired needs.
- The ability to function in multi-disciplinary and cross-functional teams.
- The ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility and the ability to communicate effectively.
- An understanding of the competitive and integrated nature of the manufacturing environment.
- The broad education necessary to understand the social, economic, environmental, and global impact of engineering solutions and a recognition of the need, and an ability to engage in life-long learning.
- A knowledge of contemporary issues as they relate to the practice of mechanical and manufacturing engineering.
- An ability to use the techniques, skills, and modern engineering tools necessary for mechanical and manufacturing engineering practice.

Medical Device Regulation

Medical Device Regulation Certificate

Medical Device Regulation
Director: Cathy Krier
Address: St. Cloud State at Plymouth, 9750 Rockford Road, Plymouth, MN 55442
Phone: 320-308-2167
Email: ras@stcloudstate.edu
Website: www.stcloudstate.edu/graduate/med-device-regulation/default.aspx

Certificate - Medical Device Regulation *(16-18 credits)*
Admission Requirements

- GPA: 2.75
- An undergraduate degree in engineering, science, biochemistry, biostatistics, public health, nursing or other appropriate and relevant areas is recommended.
- Accepted into SCSU Graduate School.
- The GRE is not required.

Plan B
Option(s): Capstone
Credits: 16-18
Core: (12 Credits) RAS 621 or MTQ 626; RAS 633 or MTQ 620; RAS 631, MTQ 624
Electives: Select 4-6 credits from the following: RAS 623, RAS 635, ACR 620, ACR 622, ACR 641, MTQ 622, MTQ 628, MTQ 634
Research:

Medical Laboratory Science

BS

Medical Laboratory Science
Chairperson: Louise Millis
Address: 145 Robert H. Wick Science Building
Phone: 320.308.2192
Website: www.stcloudstate.edu/programs/medical-laboratory-science/

BS - Medical Laboratory Science *(61 credits)*
Admission Requirements

- GPA: 2.80
- Completion of CHEM 210 and MATH 112 with a 2.0 GPA or better in the courses.

Notes

- Alternately, students may Select to apply for clinical training as SCSU students after completion of the above courses and BIOL 362, BIOL 486; CHEM 480 (instead of 241); and completion of the SCSU Liberal Education program.
- Students who have Baccalaureate Degrees in Biology or Chemistry may be eligible for the accelerated option. See Department Chair for information.
- See advisor for a list of appropriate courses.
- For 2+2 program requirements, see www.stcloudstate.edu/programs/medical-laboratory-science/details.aspx

Program Requirements
The following courses must be included in the Liberal Education plan of each student: STAT 193 to fulfill Goal Area 4; CHEM 210 and BIOL 103 to fulfill Goal Area 3. 37 credits: BIOL 151, CHEM 211, CHEM 240, CHEM 241, MATH 112, MLS 401, MLS 402, MLS 403, MLS 404, MLS 405, MLS 406, MLS 407 or MLS 444 as part of an affiliated clinical internship program.

Electives
24 credits: Elective courses are chosen in conjunction with the MLS program director and are designed to optimize the student's application for a specific clinical internship program.

Program Student Learning Outcomes

- Each instructor at the MLS Program designs his or her own learning activities and assessments, but all faculty and staff work together to help students achieve the Program?s educational goals: discipline knowledge and the ability to apply it.
- Each instructor at the MLS Program designs his or her own learning activities and assessments, but all faculty and staff work together to help students achieve the Program?s educational goals: life-long learning and critical thinking skills.
- Each instructor at the MLS Program designs his or her own learning activities and assessments, but all faculty and staff work together to help students achieve the Program?s educational goals: effective communication skills.
- Each instructor at the MLS Program designs his or her own learning activities and assessments, but all faculty and staff work together to help students achieve the Program?s educational goals: the ability to function in complex, diverse environments.

Medical Technology Quality

MS

Medical Technology Quality

Directors: Cathy Krier and Susan Petersen-Stejskal
Address: 9750 Rockford Road, Plymouth
Phone: 320.308.2167
Email: mtq@stcloudstate.edu
Website: www.stcloudstate.edu/graduate/med-tech-quality

MS - Medical Technology Quality *(33-38 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required if you have at least three years of work experience following the award of your undergraduate degree.
- A baccalaureate degree in science areas, engineering, mathematics, public health, statistics, nursing or other appropriate and relevant areas is recommended as a basis for successful completion of the M.S. MTQ degree.
- Three to five years or more of work experience following graduation from an undergraduate degree is highly preferred for admission consideration.

Plan B
Option(s): Capstone
Credits: 33
Core: Foundational Courses for Medical Technology Quality: MTQ 620, MTQ 622, MTQ 624, MTQ 626. Design and Process Development and Validation: MTQ 628, MTQ 630, MTQ 632. Quality Systems Application and Execution: MTQ 634, MTQ 636, MTQ 638
Electives:
Research: MTQ 698

Plan C
Option(s): Portfolio/Internship
Credits: 38
Core: ACR 622, MTQ 620, MTQ 622, MTQ 624, MTQ 626, MTQ 628, MTQ 630, MTQ 632, MTQ 634, MTQ 636, and MTQ 638, MTQ 644 (4-6 credits).
Electives: Select 600 level courses from RAS and ACR as approved by advisor (1-3 credits)
Research:

Certificate - Medical Technology Quality *(16-18 credits)*

Admission Requirements

- GPA: 2.75
- An undergraduate degree in engineering, science, biochemistry, biostatistics,

public health, nursing or other appropriate and relevant areas is recommended.
- Admission to the SCSU Graduate School.
- The GRE is not required.

Plan B
Option(s): Capstone
Credits: 16-18
Core: (6 credits) MTQ 620, MTQ 626
Electives: Select 10-12 credits from the following: MTQ 622, MTQ 624, MTQ 628, MTQ 630, MTQ 632, MTQ 634, MTQ 636, MTQ 638
Research:

Military Science

Minor

Military Science

Department Chair: LTC Darrell Bascom
Office Manager: Mr. Alberto DeJesus
Address: Stewart Hall Room 11
Phone: 320.308.3930
Website:armyrotc.com/edu/mnstjohns

Minor - Military Science *(16 credits)*

Program Requirements
MILS 301, MILS 302, MILS 303, MILS 304, MILS 401, MILS 402, MILS 403, MILS 404

Music

Music: Multi/Interdisciplinary Studies BA

Music

Chairperson: Kristian Twombly
Address: 238 Performing Arts
Phone: 320.308.3223
Email: music@stcloudstate.edu
Website: www.stcloudstate.edu/music

BA - Music - Multi/Interdisciplinary Studies Concentration *(40 credits)*

- Admission RequirementsSuccessful admittance into an applied studio is required for all music majors. See department website for specific requirements for each applied studio.

Notes

- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.
- All students will demonstrate functional piano skills as a requirement for graduation. Students satisfy this requirement by successfully completing the degree curriculum. See department for details.

Program Requirements
37 credits: MUSM 101, MUSM 111, MUSM 125, MUSM 202, MUSM 205, MUSM 212, MUSM 303, MUSM 313, MUSM 352, MUSM 353, MUSP 101, MUSP 373. 4 semesters of applied major (must pass 200 level). 4 semesters of performing organization. 4 semesters of MUSP 100.

Electives
3 credits music electives.

Students fulfill the University's Upper Division Writing Requirement by successfully completing MUSM 353.

Program Student Learning Outcomes

- Understand and be able to apply analytical, aural and keyboard skills in a variety of musical situations. Student shall demonstrate skills necessary to analyze music from diverse periods and cultures, and be able to use the analysis to enhance performance, conducting, and/or teaching; shall demonstrate application of keyboard skills appropriate for music concentration; and demonstrate advanced sight-singing and melodic, harmonic, and rhythmic dictation skills.
- Demonstrate knowledge and understanding of a diverse body of music in its historical and cultural context. Student shall demonstrate knowledge of significant composers (both Western and non-Western) with respect to their life span, cultural influences, style, and most representative works; and shall

demonstrate an understanding of dynamic relationships among musical structure, music history, and performance practices.
- Apply music technology in its various forms for teaching, performance, composition, and/or scholarly pursuits. Student shall demonstrate skill in creating derivative or original music that is notated using music technology and created using music technology; shall demonstrate skill in using music technology in rehearsal, performance and pedagogy; and shall demonstrate technological skills necessary to complete advanced undergraduate music research projects.
- Demonstrate knowledge of styles, literature, advanced solo and ensemble performance skills on at least one instrument from wind, percussion, string, keyboard or voice. Student shall demonstrate skills requisite for artistic self-expression in at least one major performance area at a level appropriate for their music concentration; shall demonstrate understanding of the repertory in their major performance area and the ability to perform from a cross-section of that repertory; and shall demonstrate growth in artistry, technical skills, collaborative competence and knowledge of repertory through regular ensemble experiences.
- Demonstrate ability to act independently at a high level as a musical creator, scholar, performer, and/or teacher. Student shall demonstrate skills and dispositions required to be an independent and collaborative musician in the area of concentration; and shall produce at least one high quality composition, performance, teaching unit or other musical artifact with a minimum of guidance from faculty.
- Demonstrate ability to communicate effectively -- musically, verbally and in writing. Student shall demonstrate ability to communicate musically with a variety of audiences; shall demonstrate verbal ability required for communication with a variety of groups, including audiences, students, and musicians; and shall research and write scholarly papers at a level appropriate for upper division students.

Music: Composition BA

Music

Chairperson: Kristian Twombly
Address: 238 Performing Arts
Phone: 320.308.3223
Email: music@stcloudstate.edu
Website: www.stcloudstate.edu/music

BA - Music - Composition Concentration *(63 credits)*

- Admission RequirementsSuccessful completion of requirements for B.A. Transition Point #1, MUSM 202, MUSM 212, one semester of MUSM 301, and interview with Theory/Composition faculty. (See department website for information about transition points.)

Notes

- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.

Program Requirements
Core: MUSM 101, MUSM 111, MUSM 125, MUSM 202, MUSM 205, MUSM 212, MUSM 303, MUSM 313, MUSM 352, MUSM 353, MUSP 373, MUSP 497. 4 semesters of applied major (must pass 200 level). 4 semesters of performing organization. 1 semester of class piano. Composition Concentration: MUSP 102, MUSM 304, MUSM 351, MUSM 402, MUSM 403, MUSM 433, MUSM 434. 2 semesters of MUSM 301 and MUSP 401.

Electives
3 credits selected from: MUSM 435, MUSM 437, MUSM 438.

Students fulfill the University's Upper Division Writing Requirement by successfully completing MUSM 353.

Program Student Learning Outcomes

- Understand and be able to apply analytical, aural, and keyboard skills in a variety of musical situations.
- Demonstrate knowledge and understanding of a diverse body of music in its historical and cultural context, and articulate the relationships between music, the arts, and other disciplines.
- Apply music technology in its various forms.
- Apply principles of technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods in both solo and ensemble settings.
- Demonstrate ability to think critically and act independently at a high level as a life-long musical creator, scholar, and performer.
- Demonstrate ability to communicate effectively -- musically, verbally and in writing — and adapt to diverse contexts and audiences.

BA - Music - Composition and Digital Arts Concentration *(63 credits)*

- Admission RequirementsSuccessful admittance to an applied studio is required of all music majors. See department website for specific requirements for each applied studio.

Notes

- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.
- All students will demonstrate functional piano skills as a requirement for graduation. Students satisfy this requirement by successfully completing the degree curriculum. See department for details.

Program Requirements

63 credits: MUSM 101, MUSM 111, MUSM 125, MUSM 202, MUSM 205, MUSM 212, MUSM 303, MUSM 313, MUSM 352, MUSM 353, MUSP 373, MUSP 497. 4 semesters of applied major (must pass 200 level). 4 semesters of performing organization. 1 semester of class piano. MUSP 102, MUSM 304, MUSM 402, MUSM 433, MUSM 434, MUSM 435, MUSM 437. 2 semesters of MUSM 301, MUSP 401. 1 semester of MUSM 438 (fulfills 3 credits B.A. elective). 6 semesters of MUSP 100.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing MUSM 353.

Program Student Learning Outcomes

- Understand and be able to apply analytical, aural, and keyboard skills in a variety of musical situations, as well as a thorough knowledge of compositional techniques for a range of ensembles and performing media (acoustic and electronic).
- Demonstrate knowledge and understanding of a diverse body of music in its historical and cultural context, and articulate the relationships between music, the arts, and other disciplines.
- Apply music technology in its various forms at the advanced level for performance, composition, and scholarly pursuits.
- Apply principles of technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods in both solo and ensemble settings, and be able to produce their own music in live performance.
- Demonstrate ability to think critically and act independently at a high level as a life-long musical creator, scholar, and performer.
- Demonstrate ability to communicate effectively -- musically, verbally and in writing — and adapt to diverse contexts and audiences.

Music (Education BS)

Music

Chairperson: Kristian Twombly
Address: 238 Performing Arts
Phone: 320.308.3223
Email: music@stcloudstate.edu
Website: www.stcloudstate.edu/music

BS - Music - Vocal *(69 credits)*

Admission Requirements

- GPA: 2.50
- C or better in ENGL 191 and CMST 192.
- Successful admittance to an applied studio is required of all music majors. See department website for specific requirements for each applied studio.

Notes

- Students pursuing a B.S. in Music Education, either vocal or instrumental concentration, must consult with the Music Department for recommended sequencing of liberal education and music classes.
- All students will demonstration functional piano skills as a requirement for graduation. Students satisfy this requirement by successfully completing the degree curriculum. See department for details.
- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.

Program Requirements

Music Core (59 Cr.): MUSM 101, MUSM 111, MUSM 125, MUSM 202, MUSM 205, MUSM 212, MUSM 303, MUSM 304, MUSM 313, MUSM 351, MUSM 352, MUSM 353, MUSP 373, MUSE 240, MUSE 331, MUSE 332, MUSE 468, MUSP 101, MUSP 102, MUSP 303. 6 semesters of major performing organization; 2 semesters of applied major at 100 level; 4 semesters of applied major at 200 level and above (one semester required at 300 level); 6 semesters of MUSP 100; Junior Recital (co-requisite of 1 semester applied lessons at 300 level or above), 2 semesters of applied voice for pianists instead of MUSP 101 and MUSP 102. Functional piano skills for these courses will be assessed in private piano lessons.

Vocal Concentration (10 Cr): MUSP 304, MUSP 376; MUSE 244, MUSE 334, MUSE 442.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing MUSM 353.

Program Student Learning Outcomes

- Understand and be able to apply analytical, aural and keyboard skills in a variety of musical situations. Student shall demonstrate skills necessary to analyze music from diverse periods and cultures, and be able to use the analysis to enhance performance, conducting, and/or teaching; shall demonstrate application of keyboard skills appropriate for music concentration; and shall demonstrate advanced sight-singing and melodic, harmonic, and rhythmic dictation skills.
- Demonstrate knowledge and understanding of a diverse body of music in its historical and cultural context. Student shall demonstrate knowledge of significant composers (both Western and non-Western) with respect to their life span, cultural influences, style, and most representative works; and shall demonstrate an understanding of dynamic relationships among musical structure, music history, and performance practices.
- Apply music technology in its various forms for teaching, performance, composition, and/or scholarly pursuits. Student shall demonstrate skill in creating derivative or original music that is notated using music technology and created using music technology; shall demonstrate skill in using music technology in rehearsal, performance and pedagogy; and shall demonstrate technological skills necessary to complete advanced undergraduate music research projects.
- Demonstrate knowledge of styles, literature, advanced solo and ensemble performance skills on at least one instrument from wind, percussion, string, keyboard or voice. Student shall

demonstrate skills requisite for artistic self-expression in at least one major performance area at a level appropriate for their music concentration; shall demonstrate understanding of the repertory in their major performance area and the ability to perform from a cross-section of that repertory; and shall demonstrate growth in artistry, technical skills, collaborative competence and knowledge of repertory through regular ensemble experiences.

- Demonstrate ability to act independently at a high level as a musical creator, scholar, performer, and/or teacher. Student shall demonstrate skills and dispositions required to be an independent and collaborative musician in the area of concentration; and shall produce at least one high quality composition, performance, teaching unit or other musical artifact with a minimum of guidance from faculty. It should demonstrate synthesis of collegiate music study.
- Demonstrate ability to communicate effectively -- musically, verbally and in writing. Student shall demonstrate ability to communicate musically with a variety of audiences; shall demonstrate verbal ability required for communication with a variety of groups, including audiences, students, and musicians; and shall research and write scholarly papers at a level appropriate for upper division students.

BS - Music - Instrumental *(70 credits)*

Admission Requirements

- GPA: 2.50
- C or better in ENGL 191 and CMST 192.
- Successful admittance to an applied studio is required of all music majors. See department website for specific requirements for each applied studio.

Notes

- Students pursuing a B.S. in Music Education, either vocal or instrumental concentration, must consult with the Music Department for recommended sequencing of liberal education and music classes.
- All students will demonstrate functional piano skills as a requirement for graduation. Students satisfy this requirement by successfully completing the degree curriculum. See department for details.
- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.

Program Requirements

Music Core (59 Cr.): MUSM 101, MUSM 111, MUSM 125, MUSM 202, MUSM 205, MUSM 212, MUSM 303, MUSM 304, MUSM 313, MUSM 351, MUSM 352, MUSM 353, MUSP 373, MUSE 240, MUSE 331, MUSE 332, MUSE 468, MUSP 101, MUSP 102, MUSP 303. 6 semesters of major performing organization; 2 semesters of applied major at 100 level; 4 semesters of applied major at 200 level and above (one semester required at 300 level); 6 semesters of MUSP 100; Junior Recital (co-requisite of 1 semester applied lessons at 300 level or above), 2 semesters of applied minor instrument for pianists instead of MUSP 101 and MUSP 102. Functional piano skills for these courses will be assessed in private piano lessons. Instrumental Concentration (11 Cr.): MUSP 376, MUSE 346, MUSE 347, MUSE 348, MUSE 349.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing MUSM 353.

Program Student Learning Outcomes

- Understand and be able to apply analytical, aural and keyboard skills in a variety of musical situations. Student shall demonstrate skills necessary to analyze music from diverse periods and cultures, and be able to use the analysis to enhance performance, conducting, and/or teaching; shall demonstrate application of keyboard skills appropriate for music concentration; and shall demonstrate advanced sight-singing

and melodic, harmonic, and rhythmic dictation skills.
- Demonstrate knowledge and understanding of a diverse body of music in its historical and cultural context. Student shall demonstrate knowledge of significant composers (both Western and non-Western) with respect to their life span, cultural influences, style, and most representative works; and shall demonstrate an understanding of dynamic relationships among musical structure, music history, and performance practices.
- Apply music technology in its various forms for teaching, performance, composition, and/or scholarly pursuits. Student shall demonstrate skill in creating derivative or original music that is notated using music technology and created using music technology; shall demonstrate skill in using music technology in rehearsal, performance and pedagogy; and shall demonstrate technological skills necessary to complete advanced undergraduate music research projects.
- Demonstrate knowledge of styles, literature, advanced solo and ensemble performance skills on at least one instrument from wind, percussion, string, keyboard or voice. Student shall demonstrate skills requisite for artistic self-expression in at least one major performance area at a level appropriate for their music concentration; shall demonstrate understanding of the repertory in their major performance area and the ability to perform from a cross-section of that repertory; and shall demonstrate growth in artistry, technical skills, collaborative competence and knowledge of repertory through regular ensemble experiences.
- Demonstrate ability to act independently at a high level as a musical creator, scholar, performer, and/or teacher. Student shall demonstrate skills and dispositions required to be an independent and collaborative musician in the area of concentration; and shall produce at least one high quality composition, performance, teaching unit or other musical artifact with a minimum of guidance from faculty. It should demonstrate synthesis of collegiate music study.
- Demonstrate ability to communicate effectively -- musically, verbally and in writing. Student shall demonstrate ability to communicate musically with a variety of audiences; shall demonstrate verbal ability required for communication with a variety of groups, including audiences, students, and musicians; and shall research and write scholarly papers at a level appropriate for upper division students.

Music: Instrumental Performance BMus

Music

Chairperson: Kristian Twombly
Address: 238 Performing Arts
Phone: 320.308.3223
Email: music@stcloudstate.edu
Website: www.stcloudstate.edu/music

BMus - Music - Instrumental Performance *(80 credits)*

Admission Requirements

- GPA: 2.50
- Successful admittance to an applied studio is required of all music majors. See department website for specific requirements for each applied studio.

Notes

- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.
- All students will demonstrate functional piano skills as a requirement for graduation. Students satisfy this requirement by successfully completing the degree curriculum. See department for details.

Program Requirements
Core (57): MUSM 101, MUSM 111, MUSM 125, MUSM 202, MUSM 205, MUSM 212, MUSM 303, MUSM 304, MUSM 313, MUSM 351, MUSM 352, MUSM 353, MUSM 402, MUSP 373. 2 semesters at 2 credits of applied major (100 level); 2 semesters at 3 credits of applied major (200 level); 4 semesters at 3 credits of applied major (300-400 level). 8 semesters of MUSP 100. MUSP 396 (corequisite with 300 level applied major); MUSP 496 (corequisite with 400 level applied major). Instrumental Performance Concentration (14): 6 semesters of major performing organization; 2 semesters of elective ensemble; 1 semester of applied piano MUSP 110-410; MUSP 101, MUSP 102, MUSP 303, MUSE 345.

Electives
(9 credits) Choose one: MUSM 301 (2 semesters required to fulfill elective requirement) or MUSM 433. 6-7 credits of additional music electives (must be chosen from music courses at the 300 and 400 level and approved by adviser.)

Completion of MUSM 353 fulfills the Upper Division Writing Requirement for all bachelor's degree programs offered by the Department of Music.

Program Student Learning Outcomes

- Understand and be able to apply analytical, aural, and keyboard skills in a variety of musical situations.
- Demonstrate knowledge and understanding of a diverse body of music in its historical and cultural context, and articulate the relationships between music, the arts, and other disciplines.
- Apply music technology in its various forms for teaching, performance, composition, and scholarly pursuits.
- Apply principles of technique and musicianship appropriate to the advanced level in the performance of music from diverse styles and time periods in both solo and ensemble settings.
- Demonstrate ability to think critically and act independently at a high level as a life-long musical creator, scholar, and performer.
- Demonstrate ability to communicate effectively -- musically, verbally and in writing — and adapt to diverse contexts and audiences.

Music: Piano Performance BMus

Music

Chairperson: Kristian Twombly
Address: 238 Performing Arts
Phone: 320.308.3223
Email: music@stcloudstate.edu
Website: www.stcloudstate.edu/music

BMus - Music - Piano Performance *(80 credits)*

- Admission RequirementsSuccessful admittance to an applied studio is required of all music majors. See department website for specific requirements for each applied studio.

Notes

- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.
- All students will demonstrate functional piano skills as a requirement for graduation. Students satisfy this requirement by successfully completing the degree curriculum. See department for details.

Program Requirements
Core (56): MUSM 101, MUSM 111, MUSM 125, MUSM 202, MUSM 205, MUSM 212, MUSM 303, MUSM 304, MUSM 313, MUSM 351, MUSM 352, MUSM 353, MUSM 402, MUSP 373. 2 semesters at 2 credits of applied major (100 level); 2 semesters at 3 credits of applied major (200 level); 4 semesters at 3 credits of applied major (300-400 level). 8 semesters of MUSP 100. MUSP 396 (corequisite of 300 level applied major), MUSP 496 (corequisite of 400 level applied major). Piano Performance Concentration (18): 4 semesters of major performing organization; 3 semesters of elective ensemble or chamber music; 4 semesters of applied minor instrument; Functional piano skills will be taught and assess in private piano lessons. MUSE 430, MUSE 431, MUSM 436, MUSP 405.

Electives
(6 credits): Choose one: MUSM 301 (2 semesters required to fulfill elective requirement), or MUSM 433. 3-4 credits of additional music electives (must be chosen from music courses at the 300 and 400 level and approved by advisor).

Completion of MUSM 353 fulfills the Upper Division Writing Requirement for all bachelor's degree programs offered by the Department of Music.

Program Student Learning Outcomes

- Understand and be able to apply analytical, aural, and keyboard skills in a variety of musical situations.
- Demonstrate knowledge and understanding of a diverse body of music in its historical and cultural context, and articulate the relationships between music, the arts, and other disciplines.
- Apply music technology in its various forms for teaching, performance, composition, and scholarly pursuits.
- Apply principles of technique and musicianship appropriate to the advanced level in the performance of music from diverse styles and time periods in both solo and ensemble settings.
- Demonstrate ability to think critically and act independently at a high level as a life-long musical creator, scholar, and performer.
- Demonstrate ability to communicate effectively -- musically, verbally and in writing — and adapt to diverse contexts and audiences.

Music: Vocal Performance BMus

Music

Chairperson: Kristian Twombly
Address: 238 Performing Arts
Phone: 320.308.3223
Email: music@stcloudstate.edu
Website: www.stcloudstate.edu/music

BMus - Music - Vocal Performance *(80 credits)*

- Admission RequirementsSuccessful admittance to an applied studio is required of all music majors. See department website for specific requirements for each applied studio.

Notes

- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.
- All students will demonstrate functional piano skills as a requirement for graduation. Students satisfy this requirement by successfully completing the degree curriculum. See department for details.

Program Requirements
Core (57): MUSM 101, MUSM 111, MUSM 125, MUSM 202, MUSM 205, MUSM 212, MUSM 303, MUSM 304, MUSM 313, MUSM 351, MUSM 352, MUSM 353, MUSM 402, MUSP 373. 2 semesters at 2 credits of applied major (100 level); 2 semesters at 3 credits of applied major (200 level); 4 semesters at 3 credits of applied major (300-400 level); 8 semesters of MUSP 100; MUSP 396 (corequisite with 300 level applied major); MUSP 496 (corequisite with 400 level applied major). Vocal Performance Concentration (21): 4 semesters of major performing organization; 2 semesters of elective ensemble; 2 semesters of MUSP 360; MUSE 442, MUSP 101, MUSP 102, MUSP 303, MUSP 304, MUSP 350; 2 semesters of foreign language (consult with your adviser before selecting a language emphasis).

Electives
(2 credits) Choose one: MUSM 301 (2 semesters required to fulfill elective requirement), or MUSM 433.

Completion of MUSM 353 fulfills the Upper Division Writing Requirement for all bachelor's degree programs offered by the Department of Music.

Program Student Learning Outcomes

- Understand and be able to apply analytical, aural, and keyboard skills in a variety of musical situations.
- Demonstrate knowledge and understanding of a diverse body of music

in its historical and cultural context, and articulate the relationships between music, the arts, and other disciplines.
- Apply music technology in its various forms for teaching, performance, composition, and scholarly pursuits.
- Apply principles of technique and musicianship appropriate to the advanced level in the performance of music from diverse styles and time periods in both solo and ensemble settings
- Demonstrate ability to think critically and act independently at a high level as a life-long musical creator, scholar, and performer.
- Demonstrate ability to communicate effectively -- musically, verbally and in writing — and adapt to diverse contexts and audiences.

Minors

Music

Chairperson: Kristian Twombly
Address: 238 Performing Arts
Phone: 320.308.3223
Email: music@stcloudstate.edu
Website: www.stcloudstate.edu/music

Minor - Music *(18 credits)*

Notes

- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.

Program Requirements
MUSM 101, MUSM 111, MUSM 123, MUSM 125. 2 semesters of applied instrument; 2 semesters of performing organization.

Electives
3 credits music electives.

Program Student Learning Outcomes

- Understand and be able to apply analytical, aural, and keyboard skills in a variety of musical situations.
- Demonstrate knowledge and understanding of a diverse body of music in its historical and cultural context, and articulate the relationships between music, the arts, and other disciplines.
- Apply music technology in its various forms.
- Apply principles of technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods in both solo and ensemble settings.
- Demonstrate ability to think critically and act independently at a high level as a life-long musical creator, scholar, and performer.
- Demonstrate ability to communicate effectively -- musically, verbally and in writing — and adapt to diverse contexts and audiences.

Minor - New Media - Music and Art *(24 credits)*

Notes

- Minors in New Media - Music and Art need art department permission to register for art courses.
- A grade of "C" or above in all music classes is required for all music major or minor degree programs. A "C-" in a music course is not considered a passing grade for the music major.

Program Requirements
ART 105, ART 202, MUSM 433, MUSM 434, MUSM 435 (15). Select one course from the following (3): MUSM 437, MUSM 438. Select two courses from the following (6): ART 381, ART 382, ART 383, ART 384, ART 385, ART 386.

Nursing Science

BS and Minor

Nursing Science

Chairperson: Jane Bagley
Address: 213 Brown Hall
Phone: 320.308.1749
Email: Contact Department for information
Website: www.stcloudstate.edu/nursing

BS - Nursing *(68 credits)*

Admission Requirements

- GPA: 2.75
- A minimum GPA of 2.75 (CHEM 151 and BIOL 202, BIOL 204 must be completed before application is made).
- Completion of 30 credits or more of required coursework including ENGL 191, CMST 192, MATH 193 or STAT 193, PHIL 194, PHIL 212, PSY 240, SOC 160, CHEM 141, BIOL 202, BIOL 204, BIOL 206 and completion of the application process.

Notes

- A formal application is required for admission to the major.
- Students with English as a second language are required to take the TOEFL with a passing score of 560 (paper) or 220 (CBT).

Program Requirements

NURS 317, NURS 301, NURS 302, NURS 303, NURS 304, NURS 305, NURS 306, NURS 307, NURS 308, NURS 309, NURS 310, NURS 311, NURS 312, NURS 314, NURS 315, NURS 316, NURS 401, NURS 402, NURS 404, NURS 405, NURS 406, NURS 408, NURS 411, NURS 413.

Electives

See advisor for elective courses.

Students fulfill the University's Upper Division Writing Requirement by successfully completing NURS 403.

Program Student Learning Outcomes

- Integrate theory and research-based knowledge and skill from the arts, sciences, humanities, informatics and genetics into professional nursing practice.
- Practice nurse leadership skills in a culturally diverse, rapidly changing, global society; engaging in professional development to provide high quality and safe patient care through quality improvement.
- Utilize critical thinking in the provision of holistic, evidence-based practice including integrative health that is culturally and ethnically sensitive and addresses the needs of individuals, families, groups, communities and populations in all stages of life.
- Integrate knowledge and skills in information management and patient care technology into nursing practice.
- Examine healthcare policy, including financial and regulatory environments to influence the delivery of high quality and safe patient-centered care.
- Communicate and collaborate with interprofessional teams in the design, management and provision of safe, evidence based, patient- centered care.
- Contribute to improvements in individual and population health through health promotion and disease prevention including the rural and underserved communities.
- Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice with caring at the core.

BS - RN-BS Completion *(30 credits)*

- Admission RequirementsAdmission is competitive based on Nursing GPA and references.
- Proof of active, unencumbered RN license in Minnesota.
- Minimum grade of C in each required nursing course from the associates degree.

Notes

- Information regarding applications, prerequisites, and deadlines is on the Nursing Department website.
- Must complete goal areas and upper division courses as required by the university.
- This is an online cohort program. Students are only admitted in the Fall.

Program Requirements
(30 credits): NURS 414, NURS 415, NURS 417, NURS 418, NURS 428, NURS 427, NURS 429, NURS 431.

Electives
Completion of NURS 417 fulfills the university Upper Division Writing Requirement.

Program Student Learning Outcomes

- Integrate theory and research-based knowledge and skill from the arts, sciences, humanities, informatics and genetics into professional nursing practice.
- Practice nurse leadership skills in a culturally diverse, rapidly changing, global society; engaging in professional development to provide high quality and safe patient care through quality improvement.
- Utilize critical thinking in the provision of holistic, evidence-based practice including integrative health that is culturally and ethnically sensitive and addresses the needs of individuals, families, groups, communities and populations in all stages of life.
- Integrate knowledge and skills in information management and patient care technology into nursing practice.
- Examine healthcare policy, including financial and regulatory environments to influence the delivery of high quality and safe patient-centered care.
- Communicate and collaborate with interprofessional teams in the design, management and provision of safe, evidence based, patient- centered care.
- Contribute to improvements in individual and population health through health promotion and disease prevention including the rural and underserved communities.
- Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice with caring at the core.

Nuclear Medicine Technology

BS

Nuclear Medicine Technology

Director: Steven Ratliff
Address: 145 Robert H. Wick Science Building
Phone: 320-308-2192
Email: medicalphysics@stcloudstate.edu
Website: www.stcloudstate.edu/healthsciences

BS - Nuclear Medicine Technology *(85 credits)*

Admission Requirements

- GPA: 2.50 overall
- Completion of 24 credits or more, including BIOL 151 and CHEM 210, 8 credits or more in residence at SCSU.

Notes

- U.S. citizenship is required for all students in this major.
- Admission to the major does not guarantee admission to a required clinical program.
- Students may apply to the major program when their completed credits equal or exceed 24 credits, including BIOL 151 and CHEM 210 with an overall grade point average of 2.5 or higher. At least eight credits must have been earned in residence at SCSU.
- Nuclear Medicine Technology students are not required to take BIOL 152-Organismal Diversity as a prerequisite to BIOL 262-Genetics.
- Because of required coursework in mathematics and science, students graduating with a major in Nuclear Medicine Technology satisfy the liberal education requirement in mathematics and natural/physical science.

Program Requirements
BIOL 151, BIOL 202, BIOL 204, BIOL 266. CHEM 210, CHEM 211, CHEM 240, CHEM 350, CHEM 452. PHYS 231, PHYS 232, PHYS 408; MATH 112. NMDT 499 (1 credit); STAT 239. Clinical Phase Requirements. NMDT 401, NMDT 403, NMDT 405, NMDT 407, NMDT 409, NMDT 411, NMDT 412, NMDT 413, NMDT 415, NMDT 417, NMDT 419, NMDT 421, NMDT 423, NMDT 427.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing an approved writing project in NMDT 499 with a grade of C- or better.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental and laboratory skills.
- Students will communicate knowledge of Nuclear Medicine Technology in writing.
- Students will demonstrate clinical competence in Nuclear Medicine Technology.

Physics and Astronomy

BS, BES and Minor

Physics and Astronomy

Chairperson: Chris Kvaal
Address: 324 Robert H. Wick Science Building
Phone: 320.308.2011
Email: physics@stcloudstate.edu
Website: www.stcloudstate.edu/physics/
Faculty: Physics and Astronomy

BS - Physics-Astrophysics *(69-70 credits)*

Admission Requirements

- GPA: 2.50
- 2.50 GPA or higher in all PHYS, ASTR, and ENGR courses.
- Completion of at least 16 credits.
- Completion of PHYS 235.
- High school algebra and trigonometry (MATH 072 and MATH 113) are prerequisites for students majoring or minoring in physics.

Program Requirements
PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 333, PHYS 338, PHYS 346, PHYS 430, PHYS 431, PHYS 432, PHYS 440, ENGR 332, PHYS 334, MATH 221, MATH 222, MATH 312, MATH 321, MATH 325, CHEM 210; CSCI 260 or ECE 102, PHYS 415, ASTR 311, ASTR 312, ASTR 323, ASTR 427; ENGR 447, MATH 427. At least 6 credits must be ASTR.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing PHYS 430.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

BS - Physics-Electro Optics *(69-70 credits)*

Admission Requirements

- GPA: 2.50
- 2.50 GPA or higher in all PHYS, ASTR, and ENGR courses.
- Completion of at least 16 credits.
- Completion of PHYS 235.
- High school algebra and trigonometry (MATH 072 and MATH 113) are prerequisites for students majoring or minoring in physics.

Program Requirements
PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 333, PHYS 338, PHYS 346, PHYS 430, PHYS 431, PHYS 432, PHYS 440, ENGR 332, PHYS 334, MATH 221, MATH 222, MATH 312, MATH 321, MATH 325, CHEM 210; CSCI 260 or ECE 102. PHYS 445 and at least six credits from the following: PHYS 415, PHYS 435, PHYS 436; ENGR 425, ENGR 447.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing PHYS 430.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

BS - Physics-Engineering Science *(69-70 credits)*

Admission Requirements

- GPA: 2.50
- 2.50 GPA or higher in all PHYS, ASTR, and ENGR courses.
- Completion of at least 16 credits.
- Completion of PHYS 235.
- High school algebra and trigonometry (MATH 072 and MATH 113) are prerequisites for students majoring or minoring in physics.

Program Requirements

PHYS 415; ENGR 335, ENGR 425; ECE 201. PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 333, PHYS 338, PHYS 346, PHYS 430, PHYS 431, PHYS 432, PHYS 440, ENGR 332, PHYS 334, MATH 221, MATH 222, MATH 312, MATH 321, MATH 325, CHEM 210; CSCI 260 or ECE 102.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing PHYS 430.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

BS - Physics-Mathematical Physics *(69-70 credits)*

Admission Requirements

- GPA: 2.50
- 2.50 GPA or higher in all PHYS, ASTR, and ENGR courses.
- Completion of at least 16 credits.
- Completion of PHYS 235.
- High school algebra and trigonometry (MATH 072 and MATH 113) are prerequisites for students majoring or minoring in physics.

Program Requirements

PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 333, PHYS 338, PHYS 346, PHYS 430, PHYS 431, PHYS 432, PHYS 440, ENGR 332, PHYS 334, MATH 221, MATH 222, MATH 312, MATH 321, MATH 325, CHEM 210; CSCI 260 or ECE 102. PHYS 415, PHYS 450-455; MATH 423, MATH 427, MATH 461.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing PHYS 430.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

BS - Physics-Professional Physics *(69-70 credits)*

Admission Requirements

- GPA: 2.50
- 2.50 GPA or higher in all PHYS, ASTR, and ENGR courses.
- Completion of at least 16 credits.
- Completion of PHYS 235.
- High school algebra and trigonometry (MATH 072 and MATH 113) are prerequisites for students majoring or minoring in physics.

Program Requirements

PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 333, PHYS 338, PHYS 346, PHYS 430, PHYS 431, PHYS 432, PHYS 440, ENGR 332, PHYS 334, MATH 221, MATH 222, MATH 312, MATH 321, MATH 325, CHEM 210; CSCI 260 or ECE 102; PHYS 415, PHYS 450-455; ENGR 335; MATH 427.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing PHYS 430.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

BS - Physics-Self Selection *(69-70 credits)*

Admission Requirements

- GPA: 2.50
- 2.50 GPA or higher in all PHYS, ASTR, and ENGR courses.
- Completion of at least 16 credits.
- Completion of PHYS 235.
- High school algebra and trigonometry (MATH 072 and MATH 113) are prerequisites for students majoring or minoring in physics.

Program Requirements

PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 333, PHYS 338, PHYS 346, PHYS 430, PHYS 431, PHYS 432, PHYS 440, ENGR 332, PHYS 334, MATH 221, MATH 222, MATH 312, MATH 321, MATH 325, CHEM 210; CSCI 260 or ECE 102. At least 9 credits selected under the supervision of the physics major adviser. Courses must be selected from departments within the College of Science and Engineering.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing PHYS 430.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

BS - Science - Physics/General Science Education, Grades 5-12 *(66 credits)*

Admission Requirements

- GPA: 2.75
- Completion of a minimum of 36 semester hours, with at least 12 in residence at SCSU.
- C or better in ENGL 191, CMST 192.
- Must participate in a STEM Education Admissions Event to assess student skills in writing and oral communication as well as student dispositions.

Notes

- The Liberal Education Program (LEP) incorporates the ten goals of the Minnesota Transfer Curriculum. LEP must be satisfied by completion of all ten goals and achieve a total of at least 40 credits. Completion of major courses allows for a waiver of 8 credits from goal area 3 and 3 credits from goal area 4.
- ED 431, IM 422, STEM 420 and SCI 420 are co-requisites. ED 421, ED 451, STEM 421 and SCI 430 are co-requisites.

Program Requirements
Science Core: ASTR 205, BIOL 151, BIOL 152, CHEM 210, CHEM 211, AHS 205, PHYS 234, PHYS 235, SCI 420, SCI 430, SCI 440, STEM 420, STEM 421. Physics Emphasis: ENGR 332, MATH 221, MATH 222, PHYS 328, PHYS 329, PHYS 430 or PHYS 415 (2 Cr.)

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

BS - Physics Education, Grades 9-12 *(64 credits)*

Admission Requirements

- GPA: 2.75
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.
- Must participate in a STEM Education Admissions Event to assess student skills in writing and oral communication as well as student dispositions.

Notes

- The Liberal Education Program (LEP) incorporates the ten goals of the Minnesota Transfer Curriculum. LEP must be satisfied by completion of all ten goals and achieve a total of at least 40 credits. Completion of major courses allows for a waiver of 8 credits from goal area 3 and 4 credits from goal area 4.
- ED 431, IM 422, STEM 420 and SCI 420 are co-requisites. ED 421, ED 451, STEM 421 and SCI 430 are co-requisites.

Program Requirements
CHEM 210, CHEM 211, MATH 221, MATH 222, ENGR 332, PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 430 or PHYS 415 (2 Cr.). SCI 420, SCI 430, SCI 440, STEM 420, STEM 421.

Electives
15 credits from the following: ASTR 311, ASTR 312, ASTR 323, ASTR 427, ENGR 425, ENGR 447, PHYS 304, PHYS 333, PHYS 334, PHYS 338, PHYS 346, PHYS 431, PHYS 435, PHYS 436, PHYS 440, PHYS 445

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

BES - Physics-BES *(56 credits)*

Program Requirements
PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 430; MATH 221, MATH 222, MATH 312; CHEM 210. One additional 3 credit course at the 300 level or higher from PHYS, ASTR, or ENGR.

Electives
18 credits, selected under the supervision of a physics major advisor from courses at the 200 level or above in the College of Science and Engineering.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

Minor - Physics *(34 credits)*

Admission Requirements

- GPA: 2.50
- High school algebra and trigonometry (MATH 072 and MATH 113) are prerequisites for students majoring or minoring in physics.

Program Requirements
PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 430; ENGR 332; MATH 221, MATH 222.

Electives
4 Credits of PHYS, ASTR or ENGR electives at 300 level or higher.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

Minor - Optics *(34-35 credits)*

Admission Requirements

- GPA: 2.50
- High school algebra and trigonometry (MATH 072 and MATH 113) are prerequisites for students majoring or minoring in physics.

Program Requirements
MATH 221, MATH 222; PHYS 234, PHYS 235, PHYS 333; ENGR 332 or ECE 312.

Electives
Select 3 courses: ECE 391 or PHYS 338; PHYS 435, PHYS 436, PHYS 445; ENGR 425, ENGR 447. Not available to physics majors.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

Physics: Education (BS)

Physics and Astronomy

Chairperson: Chris Kvaal
Address: 324 Robert H. Wick Science Building
Phone: 320.308.2011
Email: physics@stcloudstate.edu
Website:www.stcloudstate.edu/physics/
Faculty: Physics and Astronomy

BS - Physics Education, Grades 9-12 *(64 credits)*

Admission Requirements

- GPA: 2.75

- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.
- Must participate in a STEM Education Admissions Event to assess student skills in writing and oral communication as well as student dispositions.

Notes

- The Liberal Education Program (LEP) incorporates the ten goals of the Minnesota Transfer Curriculum. LEP must be satisfied by completion of all ten goals and achieve a total of at least 40 credits. Completion of major courses allows for a waiver of 8 credits from goal area 3 and 4 credits from goal area 4.
- ED 431, IM 422, STEM 420 and SCI 420 are co-requisites. ED 421, ED 451, STEM 421 and SCI 430 are co-requisites.

Program Requirements
CHEM 210, CHEM 211, MATH 221, MATH 222, ENGR 332, PHYS 234, PHYS 235, PHYS 328, PHYS 329, PHYS 430 or PHYS 415 (2 Cr.). SCI 420, SCI 430, SCI 440, STEM 420, STEM 421.

Electives
15 credits from the following: ASTR 311, ASTR 312, ASTR 323, ASTR 427, ENGR 425, ENGR 447, PHYS 304, PHYS 333, PHYS 334, PHYS 338, PHYS 346, PHYS 431, PHYS 435, PHYS 436, PHYS 440, PHYS 445

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

BS - Science - Physics/General Science Education, Grades 5-12 *(66 credits)*

Admission Requirements

- GPA: 2.75
- Completion of a minimum of 36 semester hours, with at least 12 in residence at SCSU.
- C or better in ENGL 191, CMST 192.
- Must participate in a STEM Education Admissions Event to assess student skills in writing and oral communication as well as student dispositions.

Notes

- The Liberal Education Program (LEP) incorporates the ten goals of the Minnesota Transfer Curriculum. LEP must be satisfied by completion of all ten goals and achieve a total of at least 40 credits. Completion of major courses allows for a waiver of 8 credits from goal area 3 and 3 credits from goal area 4.
- ED 431, IM 422, STEM 420 and SCI 420 are co-requisites. ED 421, ED 451, STEM 421 and SCI 430 are co-requisites.

Program Requirements
Science Core: ASTR 205, BIOL 151, BIOL 152, CHEM 210, CHEM 211, AHS 205, PHYS 234, PHYS 235, SCI 420, SCI 430, SCI 440, STEM 420, STEM 421. Physics Emphasis: ENGR 332, MATH 221, MATH 222, PHYS 328, PHYS 329, PHYS 430 or PHYS 415 (2 Cr.)

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental, computational and laboratory skills.
- Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing.
- Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

Philosophy

BA and Minor

Philosophy

Chairperson: Paul Neiman
Address: 365 Centennial Hall
Phone: 320.308.2234
Email: philosophy@stcloudstate.edu
Website: www.stcloudstate.edu/philosophy

BA - Philosophy *(39 credits)*

Notes

- Majors and minors must complete all required philosophy courses and those taken as electives in the program with a grade of "C-" or better to qualify for graduation.
- Students may substitute HONS courses as electives with permission of adviser.
- This major requires either one year in a single foreign language OR a minor.

Program Requirements
21 credits: PHIL 251, PHIL 252, PHIL 301, PHIL 302, PHIL 303, PHIL 304, PHIL 451.

Electives
Select 18 credits at the 200-400 level: (At least 6 credits must be at the 300 level and at least 6 additional credits at the 300 or 400 level.) PHIL 211, PHIL 212, PHIL 213, PHIL 221, PHIL 222, PHIL 251, PHIL 252, PHIL 301, PHIL 302, PHIL 303, PHIL 304, PHIL 321, PHIL 322, PHIL 323, PHIL 324, PHIL 325, PHIL 328, PHIL 326, PHIL 411, PHIL 451, PHIL 481, PHIL 482, PHIL 484.

Students fulfill the University's Upper Division Writing Requirement by successfully completing PHIL 451 with a grade of "C" or better.

Program Student Learning Outcomes

- Students will explain views of the major philosophers of the main historical periods: Ancient/Medieval, Modern, and Contemporary, and/or describe relationships (such as distinctions, similarities, indebtedness, and other connections) among them.
- Students will explain representative basic metaphysical issues and theories, major epistemological issues and theories, fundamental concepts of logic, and major issues and theories in ethics.
- Students will explain representative major epistemological issues and theories.
- Students will explain representative fundamental concepts of logic.
- Students will explain representative major issues and theories in ethics.
- Students will analyze concepts, arguments, issues, theories, and/or views.
- Students will critically evaluate concepts, arguments, issues, theories, and/or views.
- Students will theorize using abstract concepts. Students will value self-understanding and the examination of one's life.
- Students will gain a reflective habit of mind.
- Students will increase their love of learning. Students will exhibit intellectual integrity.

BA - Philosophy - Interdisciplinary *(36 credits)*

Notes

- This major requires either one year in a single foreign language OR a minor.
- Students may substitute HONS courses as electives with permission of adviser.
- Majors and minors must complete all required philosophy courses and those taken as electives in the program with a grade of "C-" or better to qualify for graduation.

Program Requirements
21 credits: PHIL 251, PHIL 252, PHIL 301, PHIL 302, PHIL 303, PHIL 304, PHIL 451.

Electives
Select 15 credits: PHIL 211, PHIL 212, PHIL 213, PHIL 221, PHIL 222, PHIL 251, PHIL 252, PHIL 301, PHIL 302, PHIL 303, PHIL 304, PHIL 321, PHIL 322, PHIL 323, PHIL 324, PHIL 325, PHIL 326, PHIL 328, PHIL 411, PHIL 451, PHIL 481, PHIL 482, PHIL 484; up to four non-philosophy courses may be substituted.

Students fulfill the University's Upper Division Writing Requirement by successfully completing PHIL 451 with a grade of "C" or better.

Program Student Learning Outcomes

- Students will explain views of the major philosophers of the main historical periods: Ancient/Medieval, Modern, and Contemporary, and/or describe relationships (such as distinctions, similarities, indebtedness, and other connections) among them.
- Students will explain representative basic metaphysical issues and theories, major epistemological issues and theories, fundamental concepts of logic, and major issues and theories in ethics.
- Students will analyze concepts, arguments, issues, theories, and/or views.
- Students will critically evaluate concepts, arguments, issues, theories, and/or views.
- Students will theorize using abstract concepts.
- Students will value self-understanding and the examination of one's life.
- Students will gain a reflective habit of mind.
- Students will increase their love of learning.
- Students will exhibit intellectual integrity.

Minor - Philosophy Interdisciplinary *(18 credits)*

Notes

- Students may substitute HONS courses as electives with permission of adviser.
- Majors and minors must complete all required philosophy courses and those taken as electives in the program with a grade of "C-" or better to qualify for graduation.

Program Requirements

9 credits: PHIL 251 or PHIL 252; two of PHIL 301, PHIL 302, PHIL 303 or PHIL 304.

Electives

Select 9 credits: PHIL 211, PHIL 212, PHIL 213, PHIL 221, PHIL 222, PHIL 251, PHIL 252, PHIL 301, PHIL 302, PHIL 303, PHIL 304, PHIL 321, PHIL 322, PHIL 323, PHIL 324, PHIL 325, PHIL 326, PHIL 328, PHIL 411, PHIL 451, PHIL 481, PHIL 482, PHIL 484; up to two non-philosophy courses may be substituted.

Program Student Learning Outcomes

- Students will explain views of the major philosophers of the main historical periods: Ancient/Medieval, Modern, and Contemporary, and/or describe relationships (such as distinctions, similarities, indebtedness, and other connections) among them.
- Students will explain representative basic metaphysical issues and theories, major epistemological issues and theories, fundamental concepts of logic, and major issues and theories in ethics.
- Students will analyze concepts, arguments, issues, theories, and/or views.
- Students will critically evaluate concepts, arguments, issues, theories, and/or views.
- Students will theorize using abstract concepts.
- Students will value self-understanding and the examination of one's life.
- Students will gain a reflective habit of mind.
- Students will increase their love of learning.
- Students will exhibit intellectual integrity.

Minor - Philosophy *(18 credits)*

Notes

- Students may substitute HONS courses as electives with permission of adviser.
- Majors and minors must complete all required philosophy courses and those taken as electives in the program with a grade of "C-" or better to qualify for graduation.

Program Requirements
12 credits: PHIL 251 or PHIL 252, three of PHIL 301, PHIL 302, PHIL 303, PHIL 304.

Electives
Select 6 additional credits at the 200-400 level: (At least 3 credits required at either the 300 or 400 level.) PHIL 211, PHIL 212, PHIL 213, PHIL 221, PHIL 222, PHIL 251, PHIL 252, PHIL 301, PHIL 302, PHIL 303 PHIL 304, PHIL 321, PHIL 322, PHIL 323, PHIL 324, PHIL 325, PHIL 326, PHIL 328, PHIL 411, PHIL 451, PHIL 481, PHIL 482, PHIL 484.

Program Student Learning Outcomes

- Students will explain views of the major philosophers of the main historical periods: Ancient/Medieval, Modern, and Contemporary, and/or describe relationships (such as distinctions, similarities, indebtedness, and other connections) among them.
- Students will explain representative basic metaphysical issues and theories, major epistemological issues and theories, fundamental concepts of logic, and major issues and theories in ethics.
- Students will explain representative major epistemological issues and theories.
- Students will explain representative fundamental concepts of logic. Students will explain representative major issues and theories in ethics.
- Students will analyze concepts, arguments, issues, theories, and/or views.
- Students will critically evaluate concepts, arguments, issues, theories, and/or views.
- Students will theorize using abstract concepts.
- Students will value self-understanding and the examination of one's life.
- Students will gain a reflective habit of mind.
- Students will increase their love of learning. Students will exhibit intellectual integrity.

Minor - Ethics *(18 credits)*

Program Requirements
(6 cr.): PHIL 212, PHIL 301

Electives
(12 cr.): four additional courses selected from: PHIL 211, PHIL 213, PHIL 322, PHIL 328, PHIL 481, PHIL 482, PHIL 484. PHIL 411 and PHIL 451 may be substituted with adviser approval.

Philosophy: Interdisciplinary BA and Minor

Philosophy

Chairperson: Paul Neiman
Address: 365 Centennial Hall
Phone: 320.308.2234
Email: philosophy@stcloudstate.edu
Website: www.stcloudstate.edu/philosophy

BA - Philosophy - Interdisciplinary *(36 credits)*

Notes

- This major requires either one year in a single foreign language OR a minor.
- Students may substitute HONS courses as electives with permission of adviser.
- Majors and minors must complete all required philosophy courses and those taken as electives in the program with a grade of "C-" or better to qualify for graduation.

Program Requirements
21 credits: PHIL 251, PHIL 252, PHIL 301, PHIL 302, PHIL 303, PHIL 304, PHIL 451.

Electives
Select 15 credits: PHIL 211, PHIL 212, PHIL 213, PHIL 221, PHIL 222, PHIL 251, PHIL 252, PHIL 301, PHIL 302, PHIL 303, PHIL 304, PHIL 321, PHIL 322, PHIL 323, PHIL 324, PHIL 325, PHIL 326, PHIL 328, PHIL 411, PHIL 451, PHIL 481, PHIL 482, PHIL 484; up to four non-philosophy courses may be substituted.

Students fulfill the University's Upper Division Writing Requirement by successfully completing PHIL 451 with a grade of "C" or better.

Program Student Learning Outcomes

- Students will explain views of the major philosophers of the main historical

periods: Ancient/Medieval, Modern, and Contemporary, and/or describe relationships (such as distinctions, similarities, indebtedness, and other connections) among them.
- Students will explain representative basic metaphysical issues and theories, major epistemological issues and theories, fundamental concepts of logic, and major issues and theories in ethics.
- Students will analyze concepts, arguments, issues, theories, and/or views.
- Students will critically evaluate concepts, arguments, issues, theories, and/or views.
- Students will theorize using abstract concepts.
- Students will value self-understanding and the examination of one's life.
- Students will gain a reflective habit of mind.
- Students will increase their love of learning.
- Students will exhibit intellectual integrity.

Minor - Philosophy Interdisciplinary *(18 credits)*

Notes

- Students may substitute HONS courses as electives with permission of adviser.
- Majors and minors must complete all required philosophy courses and those taken as electives in the program with a grade of "C-" or better to qualify for graduation.

Program Requirements

9 credits: PHIL 251 or PHIL 252; two of PHIL 301, PHIL 302, PHIL 303 or PHIL 304.

Electives

Select 9 credits: PHIL 211, PHIL 212, PHIL 213, PHIL 221, PHIL 222, PHIL 251, PHIL 252, PHIL 301, PHIL 302, PHIL 303, PHIL 304, PHIL 321, PHIL 322, PHIL 323, PHIL 324, PHIL 325, PHIL 326, PHIL 328, PHIL 411, PHIL 451, PHIL 481, PHIL 482, PHIL 484; up to two non-philosophy courses may be substituted.

Program Student Learning Outcomes

- Students will explain views of the major philosophers of the main historical periods: Ancient/Medieval, Modern, and Contemporary, and/or describe relationships (such as distinctions, similarities, indebtedness, and other connections) among them.
- Students will explain representative basic metaphysical issues and theories, major epistemological issues and theories, fundamental concepts of logic, and major issues and theories in ethics.
- Students will analyze concepts, arguments, issues, theories, and/or views.
- Students will critically evaluate concepts, arguments, issues, theories, and/or views.
- Students will theorize using abstract concepts.
- Students will value self-understanding and the examination of one's life.
- Students will gain a reflective habit of mind.
- Students will increase their love of learning.
- Students will exhibit intellectual integrity.

Philosophy: Mathematics (Majors only) Minor

Philosophy

Chairperson: Paul Neiman
Address: 365 Centennial Hall
Phone: 320.308.2234
Email: philosophy@stcloudstate.edu
Website: www.stcloudstate.edu/philosophy

Minor - Philosophy - Mathematics Majors Only *(24 credits)*

Program Requirements

18 credits: PHIL 251, PHIL 252 or PHIL 321; PHIL 302; PHIL 303; PHIL 304; at least one of PHIL 324, PHIL 325 or PHIL 326.

Electives

6 credits: PHIL 301, PHIL 322, PHIL 323, PHIL 324, PHIL 325, PHIL 326, PHIL 411, PHIL 451, PHIL 481,

PHIL 482 and PHIL 484. At least one course in the program must be at the 400 level.

Program Student Learning Outcomes

- Students will explain views of the major philosophers of the main historical periods: Ancient/Medieval, Modern, and Contemporary, and/or describe relationships (such as distinctions, similarities, indebtedness, and other connections) among them.
- Students will explain representative basic metaphysical issues and theories, major epistemological issues and theories, fundamental concepts of logic, and major issues and theories in ethics.
- Students will analyze concepts, arguments, issues, theories, and/or views.
- Students will critically evaluate concepts, arguments, issues, theories, and/or views.
- Students will theorize using abstract concepts.
- Students will value self-understanding and the examination of one's life.
- Students will gain a reflective habit of mind.
- Students will gain a reflective habit of mind.
- Students will exhibit intellectual integrity.

Political Science

BA and Minor

Political Science

Chairperson: Jason Lindsey
Address: 51B 328
Phone: 320.308.2162
Website: www.stcloudstate.edu/politicalscience

BA - Political Science *(37 credits)*

- Admission RequirementsA student must pass POL 101 and POL 111 with a grade of "C-" or better before admission to the major.
- Completion of POL 101, POL 111.

Notes

- Any POL course not used to meet the requirements may be used as an elective, with the following exceptions: A maximum of 6 credits from POL 444 and up to 3 credits of independent study as a survey director may be earned.
- A maximum of 3 credits may be used from non-departmental offerings, including the following courses: ECON 350, ECON 360, ECON 460, ECON 461, ECON 474, ECON 478, ECON 483 and other courses by petition and with the approval of the department.
- At least 24 credits must be taken at the 300 level or above.
- For a current list of courses, see the Department of Political Science Office.

Program Requirements
POL 101, POL 111, POL 201, POL 251 and POL 420. One course in American government (300 or 400 level). One course in comparative government (300 or 400 level). One course in international relations (300 or 400 level). One course in political theory (300 or 400 level).

Electives
12 Credits with the approval of the department.

Program Student Learning Outcomes

- Foundation in political ideas and institutions both nationally and globally.
- Diverse methodologies and data collection and analysis techniques necessary to engage in sophisticated analysis of political phenomenon.
- Understand disciplines of political science.
- Enhanced analytical and critical thinking skills after surveying major learning experiences and addressing career discipline issues.

Minor - Political Science *(18 credits)*

- Admission RequirementsA student must pass POL 101 and POL 111 with a grade of C or better to be admitted to the minor.

Notes

- Only courses with a grade of C or better may be counted toward the minor.
- Students will normally take POL 101 and POL 111 in the freshman year and take POL 201 and POL 251 in the sophomore year. Majors and minors normally should take all required core lower level courses before registering for 300 - and above courses in the maj
- For a current list of courses, see the Department of Political Science Office.

Program Requirements
POL 101, POL 111, POL 251. One course in American government (300 or 400 level). One course in comparative government or one course in international relations (300 or 400 level). One course in political theory (300 or 400 level).

International Relations (BA and Minor)

Political Science
Chairperson: Jason Lindsey
Address: 51B 328
Phone: 320.308.2162
Website: www.stcloudstate.edu/politicalscience

BA - International Relations *(40 credits)*

- Admission RequirementsThe student must submit a transcript or course summary.
- A student must have completed POL 101, POL 111, and POL 251 with a "C-" or better in each course in order to be admitted into the major.

Notes

- Lower division courses are offered each semester.
- Required upper division courses are offered annually.
- Elective courses are offered only in alternate years.
- All course work must receive at least a "C-" to count towards the major.
- See the Department of Political Science for instructions on the application process.

Program Requirements
12 credits: POL 101, POL 111, POL 201, POL 251. 15 credits: POL 337, POL 353, POL 354, POL 355, POL 454.

Electives
Select 6 credits: POL 351, POL 451, POL 452, POL 453, POL 456, POL 457.

Students fulfill the University's Upper Division Writing Requirement by successfully completing the senior project course POL 420. The requirement is met by completing a portfolio of work, a single written paper or through multiple papers with a grade of

Program Student Learning Outcomes

- Foundation in political ideas and institutions both nationally and globally.
- Diverse methodologies and data collection and analysis techniques necessary to engage in sophisticated analysis of political phenomenon.
- Knowledge of emerging political and governmental issues in the Nonwestern World.
- Thorough grounding in the policies and processes, governing systems, and political behavior of actors in the international system.
- Enhanced understanding of the interaction of state and non-state actors in the international system and how these interactions impact each other in such areas as conflict, conflict resolution, environmental sustainability.
- Understand the diversity of international actors in county and regional specific courses.
- Increased analytical and critical thinking skills after surveying their major learning experiences and addressing career discipline issues.

Minor - International Relations *(21 credits)*

Admission Requirements

- Students must take POL 101 and POL 251 before being admitted to the minor.

Program Requirements
6 credits: POL 101, POL 251. Required Upper Level International Relations (3 credits): POL 354 or POL 454. 9 credits: POL 337, POL 353, POL 355.

Electives
Select 3 credits: POL 331, POL 332, POL 333, POL 334, POL 355, POL 336, POL 338, POL 339, POL 434, POL 436.

Latin American Studies BA and Minor

Political Science
Chairperson: Jason Lindsey
Address: 51B 328
Phone: 320.308.2162
Website: www.stcloudstate.edu/politicalscience

BA - Latin American Studies *(36 credits)*
Notes

- Language Competency: Completion of a year of 200 level course work or the equivalent in Spanish or Portuguese.

Program Requirements
LAST 250; GEOG 373; HIST 361, HIST 362; ECON 480 or POL 333.

Electives
21 Credits: ECON 350, ECON 480; HIST 354; LAST 350, LAST 370; POL 333; SPAN 341, SPAN 411 (Spanish-American only), SPAN 440, SPAN 442, SPAN 443; Independent Study 199-499 (maximum 6 credits). Up to 6 credits of seminar/topics/problems/field study or new courses in various departments which have a substantial Latin American content also may be used with the permission of the advisor. Students who have participated in SCSU's Latin America program may use a maximum of 9 credits of non-Spanish language courses and 3 credits of SPAN 460 completed in Latin America toward the major.

Minor - Latin American Studies *(27 credits)*
Program Requirements
LAST 250; GEOG 373; HIST 361 or HIST 362; ECON 480 or POL 333.

Electives
15 credits: Select among the required or elective classes in the major. Students who have participated in SCSU's Latin American Program may use a maximum of 6 credits of non-Spanish language courses and 3 credits of SPAN 460 (Study Abroad) completed in Latin American toward the minor. LAST minors are encouraged to include some study of Spanish or Portuguese in their academic programs.

Social Studies: Political Science BS

Political Science
Chairperson: Jason Lindsey
Address: 51B 328
Phone: 320.308.2162
Website: www.stcloudstate.edu/politicalscience

BS - Social Studies: Political Science *(27 credits)*
Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements
Social Studies Licensing Core: ANTH 250; ECON 201; GEOG 253, 270; HIST 140 or HIST 141, HIST 106 (global only), HIST 385; ETHS 310; POL 251; PSY 240; SOC 160; SST 253, SST 441, SST 453. Political Science Core (27 credits): POL 101, POL 111, POL 251, POL 491 or POL 492. Three courses (9 credits) in

American Government (300 or 400 level). One course (3 credits) in international relations or comparative government (300 or 400 level). One course (3 credits) in political theory (300 or 400 level).

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

Health Administration Certificate

Political Science

Chairperson: Jason Lindsey
Address: 51B 328
Phone: 320.308.2162
Website: www.stcloudstate.edu/politicalscience

Certificate - Health Administration *(32-38 credits)*

Admission Requirements

- GPA: 2.0

Program Requirements

ACCT 291, ACCT 292, BIOL 266, CNA 302, GERO 208, MGMT 352+ or POL 482/582; POL 201, POL 380, POL 444, POL 466/566, POL 488/588.

Psychology

BA and Minor

Psychology

Chairperson: Leslie Valdes
Address: 101 Whitney House
Phone: 320.308.4157
Email: psychology@stcloudstate.edu
Website: www.stcloudstate.edu/psychology

BA - Psychology *(41 credits)*

Notes

- Students admitted prior to March 28, 2014, need to follow the program in their degree audit report.
- Graduation Requirements: Minor or one year of foreign language; 15 Psychology credits in residence; Minimum 2.5 GPA in Psychology.

Program Requirements

Core (14 credits, must be taken in sequence): PSY 115, PSY 119, PSY 200, PSY 201 (co-requisites), PSY 202, PSY 380. Foundations (15 credits): PSY 240, PSY 250, PSY 270, PSY 327, PSY 353, PSY 378, PSY 386, PSY 490. Capstone (3 credits): PSY 401, PSY 430, PSY 432 or PSY 435

Electives

9 Credits: Any three psychology classes. No more than six credits of any one course.

Program Student Learning Outcomes

- Students will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
- Students will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.
- Students will respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to

solve problems related to behavior and mental processes.
- Students will understand and apply psychological principles to personal, social, and organizational issues.
- Students will be able to weigh evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a science.
- Students will demonstrate information competence and the ability to use computers and other technology for many purposes.
- Students will be able to communicate effectively in a variety of formats.
- Students will recognize, understand, and respect the complexity of sociocultural and international diversity.
- Students will develop insight into their own and others' behavior and mental processes and apply effective strategies for self-management and self-improvement.
- Students will emerge from the major with realistic ideas about how to implement their psychological knowledge, skills, and values in occupational pursuits in a variety of settings.

Minor - Psychology-BES *(18 credits)*

Program Requirements

PSY 115, at least two courses from the Foundations (PSY 240, PSY 250, PSY 270, PSY 327, PSY 353, PSY 378, PSY 386, PSY 490) and any three other Psychology courses.

Minor - Psychology *(18 credits)*

Program Requirements

PSY 115; two courses from: PSY 240, PSY 250, PSY 270, PSY 327, PSY 353, PSY 378, PSY 386, or PSY 490 and ANY three other PSY courses.

Program Student Learning Outcomes

- Students will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
- Students will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.
- Students will respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.
- Students will understand and apply psychological principles to personal, social, and organizational issues.
- Students will be able to weigh evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a science.
- Students will demonstrate information competence and the ability to use computers and other technology for many purposes.
- Students will be able to communicate effectively in a variety of formats.
- Students will recognize, understand, and respect the complexity of sociocultural and international diversity.
- Students will develop insight into their own and others' behavior and mental processes and apply effective strategies for self-management and self-improvement.
- Students will emerge from the major with realistic ideas about how to implement their psychological knowledge, skills, and values in occupational pursuits in a variety of settings.

Industrial/Organizational Psychology MS

Psychology

Chairperson: Leslie Valdes
Address: 101 Whitney House
Phone: 320.308.4157
Email: psychology@stcloudstate.edu
Website: www.stcloudstate.edu/psychology

MS - Industrial/Organizational Psychology *(41 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is required.

Notes

- The following undergraduate courses are helpful: introductory psychology, industrial-organizational psychology, statistics, research methods or experimental psychology, and social psychology. It is also recommended that prospective students have a strong quantitative background.

Plan A
Option(s): Thesis
Credits: 41
Core: 15 credits: PSY 560, PSY 661, PSY 662, PSY 663, PSY 664
Electives: 9 credits. Select 3-6 credits from the following: PSY 525, PSY 592, PSY 630, PSY 640, PSY 647, PSY 671. Related Fields: Select 3-6 credits from the following: MBA 667, MBA 673, MGMT 551, MGMT 552, MGMT 553, MGMT 567, SOC 656
Research: 17 credits: PSY 505, PSY 602, PSY 603, PSY 604, PSY 699

Plan C
Option(s): Portfolio/Project
Credits: 41
Core: 15 credits: PSY 560, PSY 661, PSY 662, PSY 663, PSY 664
Electives: 9 credits. Select 3-6 credits from the following: PSY 525, PSY 592, PSY 630, PSY 640, PSY 647, PSY 671. Related Fields: Select 3-6 credits from the following: MBA 667, MBA 673, MGMT 551, MGMT 552, MGMT 553, MGMT 567, SOC 656
Research: 17 credits: PSY 505, PSY 602, PSY 603, PSY 604, PSY 696

Program Student Learning Outcomes

- Students will demonstrate understanding of the core areas of I-O psychology as recommended by the Society for Industrial-Organizational Psychology (Professional Ethics, Job Analysis, Performance Appraisal, Criterion Development, Personnel Selection and Individual Psychological Assessment, Employee Training and Organizational Development, and Organizational Psychology, Attitude and Group Theory).
- Students will demonstrate fundamental knowledge and skills of key concepts in psychological research methods, statistics, and psychometrics.
- Students will demonstrate understanding of key concepts in related disciplines such as management and sociology through curriculum electives which will broaden their perspective and further their knowledge in concepts that underlie effective organizational functioning.
- Students will orient their education toward one of two goals: (a) to pursue a further graduate education or (b) to seek employment.
- Students will be able to formulate testable hypotheses describing an organization's situation and identify appropriate methods for testing the hypotheses.
- Students will understand the role of data in organizational analysis and development (both diagnosis and assessment) and be prepared to be a knowledgeable and critical consumer of data, collecting and using data, and data analysis.
- Students will demonstrate an understanding of the ethical and social implications of diversity in work settings.
- Students will acquire a fundamental understanding of contemporary issues in industrial-organizational psychology.
- Students will demonstrate the ability to utilize conceptual and theoretical knowledge, empirical analysis, and intervention strategy selection to solve organizational problems in a variety of settings.

Radiologic Technology

BS

Radiologic Technology
Director: Steven Ratliff
Address: 145 Robert H.Wick Science Building
Phone: 320.308.2192
Email: medicalphysics@stcloudstate.edu
Website: www.stcloudstate.edu/healthsciences

BS - Radiologic Technology *(88 credits)*

Admission Requirements

- GPA: 2.0 (overall and in major courses)
- Completion of 15 credits or more, including MATH 112 and PHYS 231, 12 credits or more in residence at SCSU, and approval of the Radiologic Technology program director.

Notes

- All courses except for RADT 375, RADT 475, PHYS 354, PHYS 454 and PHYS 309 must be completed prior to beginning the clinical phase.
- Admission to the major does not guarantee admission to a required clinical program.
- Because of required coursework in mathematics and science, students graduating with a major in Radiologic Technology are considered as having satisfied the liberal education requirement in mathematics and natural/physical science.

Program Requirements
Pre-Clinical Core (25 credits): BIOL 202, BIOL 204, BIOL 266, CHEM 210, PHYS 231, PHYS 232, MATH 112 (or higher level algebra or calculus course). MATH 193 and MATH 196 are not acceptable. Clinical Education: 56 credits. RADT 375 (14 credits), RADT 475 (14 credits), PHYS 354 (14 credits), PHYS 454 (14 credits). Professional Core (7 credits): PHYS 308, PHYS 309, PHYS 408.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing an approved writing project in PHYS 309 with a grade of C- or better.

Program Student Learning Outcomes

- Students will make inferences and deductions based on knowledge of physics.
- Students will demonstrate experimental and laboratory skills.
- Students will communicate knowledge of Radiologic Technology in writing.
- Students will demonstrate clinical competence in Radiologic Technology.

Regulatory Affairs and Services

MS

Regulatory Affairs and Services
Director: Cathy Krier
Address: 9750 Rockford Road, Plymouth
Phone: 320.308.4262
Email: ras@stcloudstate.edu
Website:
www.stcloudstate.edu/graduate/regulatory-affairs

MS - Regulatory Affairs and Services *(33-36 credits)*
Admission Requirements

- GPA: 2.75
- An undergraduate degree in engineering, biochemistry, biostatistics, public health, nursing or other appropriate and relevant areas is recommended as a basis for successful completion of the M.S. RAS degree.
- The GRE is not required.

Plan B
Option(s): Capstone
Credits: 33
Core: RAS 621, RAS 623, RAS 625, RAS 627, RAS 631, RAS 633, RAS 635, RAS 641 or RAS 643
Electives: RAS 651, RAS 653, RAS 655
Research: RAS 690

Plan C
Option(s): Portfolio/Internship
Credits: 36
Core: ACR 622, RAS 621, RAS 623, RAS 625, RAS 627, RAS 631, RAS 633, RAS 635, RAS 644 (4-6 credits).
Electives: Select 600 level courses from RAS, ACR, MTQ as approved by advisor (1-3 credits).
Research:

Program Student Learning Outcomes

- Students will be able to use principles of experimental design, sample size estimation, and analysis methods to draft clinical trial protocols.

- Students will be able to assess quality system standards, procedures, and practices.
- Students will be able to apply economic principles of the health care market, including cost management and reimbursement for medical technology.
- Students will be able to present technical information and analysis in both oral and written forms.
- Students will be able to present technical information and analysis in both oral and written forms.

Certificate - Regulatory Affairs *(16-18 credits)*

Admission Requirements

- GPA: 2.75
- An undergraduate degree in engineering, science, biochemistry, biostatistics, public health, nursing or other appropriate and relevant areas is recommended.
- Admission to SCSU Graduate School.
- The GRE is not required.

Plan B
Option(s): Capstone
Credits: 16-18
Core: (6 credits) RAS 621, RAS 633
Electives: Select 10-12 credits from the following: RAS 623, RAS 625, RAS 627, RAS 631, RAS 635, RAS 655, MTQ 634, MTQ 638
Research:

Program Student Learning Outcomes

- Synthesize principles of medical device regulatory requirements, investigational device exemptions, regulatory submissions and compliance in a global society.
- Use principles of experimental design, sample size estimation, and analysis methods to draft clinical trial protocols.
- Assess quality system standards, procedures, and practices.
- Apply economic principles of the health care market, including cost management and reimbursement for medical technology.
- Present technical information and analysis in both oral and written forms.

Science, Technology, Engineering and Mathematics Education (STEM)

Minor in Science, Technology, Engineering and Mathematics Education (STEM)

Science, Technology, Engineering and Mathematics Education (STEM)

Director: Melissa Hanzsek-Brill
Address: Engineering and Computing Center 157
Phone: 320-308-2282
Email: mhanzsek@stcloudstate.edu

Minor - Science, Technology, Engineering, and Mathematics Education *(18 credits)*

Admission Requirements

- GPA: 2.75
- Major in Elementary Education, Special Education and/or Child and Family Studies
- Required courses for the majors (MATH 301; SCI 226 or SCI 227; ED 200 or SPED 200 or CFS 200) must be completed with a grade of C or better in each course.

Program Requirements
SPED 413 or SPED 445, STEM 425, STEM 431, STEM 442, STEM 451, STEM 452

Science, Technology, Engineering and Mathematics Education (STEM)

Science, Technology, Engineering and Mathematics Education (STEM)

Director: Melissa Hanzsek-Brill
Address: Engineering and Computing Center 157
Phone: 320-308-2282
Email: mhanzsek@stcloudstate.edu
Website: https://www.stcloudstate.edu/graduate/stem-ed-cert/default.aspx

Certificate - Science, Technology, Engineering and Mathematics Education *(18 credits)*

- Admission RequirementsCertified teacher in Elementary Education, Special Education and/or Child and Family Studies

Program Requirements
SPED 513 or SPED 545, STEM 525, STEM 531, STEM 542, STEM 551, STEM 552

Social Science

BS

BS - Social Studies: Social Science *(15 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.
- Admission Criteria: See here. Professional Education Sequence for Pre K-12 and 5-12 Licensure: ED 300; CEEP 262, CEEP 361; IM 422; HLTH 301; HURL 497; ENGL 460 or ED 460; SPED 203; ED 421 and ED 431(co-requisites); ED 466 or ED 467. Admission to Teacher Education and a passing score on the MTLE Basic skills tests is required for placement in student teaching.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Many of the social studies licensure core courses may be used for the liberal education program.
- Program currently not enrolling new students.

Program Requirements
Social Studies Licensing Core: ANTH 250; ECON 201; GEOG 253, GEOG 270; HIST 140 or HIST 141, HIST 106 (global only), HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SPC 160; SST 253, SST 441, SST 453. Social Science Core: Five courses from at least two of the following areas/departments: GEOG, POL, HIST, PSY, SST, ECON, SOC. Only one course may be at the 200 level, all others need to be at the 300/400 level. Courses cannot come from the Broad Field Licensure Area. All courses must be approved by the Social Studies Education program faculty.

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

Religious Studies

Minor

Religious Studies

Director: Kevin Sharpe
Address: Centennial Hall 365O
Phone: 320.308.5316
Website: www.stcloudstate.edu/religiousstudies

Minor - Religious Studies (BA) *(21 credits)*

Admission Requirements

- GPA: 2.0

Notes

- Students may enter the program when their completed credits equal or exceed 24 credits in all colleges and at least 9 credits in residence at SCSU.
- Religious studies minor students may request exemption from prerequisites of ANTH 369.

Program Requirements
Select three courses from: REL 100, REL 150, REL 151, REL 180, REL 201, REL 225, JWST 180. Select two courses from: ANTH 369, PHIL 111, PHIL 221, REL 300, ENGL 302 (Religious studies minor students may request exemption from prerequisite of ANTH 369).

Electives
Select two courses from: These may be taken from courses listed above and from the following: REL 411; ENGL 321, ENGL 481 (Topics in Literature); HIST 402, HIST 403, HIST 405; JWST 318; MUSM 125; PHIL 251, PHIL 411.

Minor - Religious Studies-BES *(27 credits)*

Admission Requirements

- GPA: 2.0

Notes

- Students may enter the program when their completed credits equal or exceed 24 credits in all colleges and at least 9 credits in residence at SCSU.

Program Requirements
Completion of any 27 credits from courses listed in the religious studies minor with the approval of the director.

Social Studies

BS

BS - Social Studies: Economics *(21 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Students in this Concentration are not required to take ECON 201 in their Social Studies Licensing Core.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements
Social Studies Licensing Core: ANTH 250; GEOG 253, 270; HIST 140 or HIST 141, HIST 106 (global only), HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SOC 160; SST 253, SST 441, SST 453. Economics Core: ECON 205, ECON 206, ECON 360, ECON 405, ECON 406.

Electives
One of ECON 471 or 474, and one of the following: ECON 417, ECON 420, ECON 442, ECON 451, ECON 460, ECON 461, ECON 465, ECON 472, ECON 473.

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and

pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

BS - Social Studies: Geography *(68 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Students in the Geography Concentration are not required to take GEOG 253 in their Social Studies Licensing Core.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements

Social Studies Licensing Core (44 credits): ANTH 250; ECON 201; GEOG 253, GEOG 270; HIST 140 or HIST 141, HIST 106 (global only), HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SOC 160; SST 253, SST 441, SST 453. Geography Core (15 credits): GEOG 111, GEOG 270, GEOG 271, GEOG 272 and GEOG 376.

Electives

9 credits of electives selected from: GEOG 368, GEOG 369, GEOG 372, GEOG 373, GEOG 374, GEOG 384, GEOG 471 or GEOG 486. GEOG 410 may be substituted with approval of advisor.

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

BS - Social Studies: History *(24 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the concentrations in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements
Social Studies Licensing Core: ANTH 250; ECON 201; GEOG 253, GEOG 270; HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SOC 160; SST 253, SST 441, SST 453; History Core: HIST 140, HIST 141, HIST 210, HIST 211. 6 credits from the following: HIST 361, HIST 362, HIST 365, HIST 369, HIST 370, HIST 371, HIST 402, HIST 467, HIST 486.

Electives
6 credits of 300-400 level History courses.

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

BS - Social Studies: Political Science *(27 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements
Social Studies Licensing Core: ANTH 250; ECON 201; GEOG 253, 270; HIST 140 or HIST 141, HIST 106 (global only), HIST 385; ETHS 310; POL 251; PSY 240; SOC 160; SST 253, SST 441, SST 453. Political Science Core (27 credits): POL 101, POL 111, POL 251, POL 491 or POL 492. Three courses (9 credits) in American Government (300 or 400 level). One course (3 credits) in international relations or comparative government (300 or 400 level). One course (3 credits) in political theory (300 or 400 level).

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various

social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

BS - Social Studies: Social Science *(15 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.
- Admission Criteria: See here. Professional Education Sequence for Pre K-12 and 5-12 Licensure: ED 300; CEEP 262, CEEP 361; IM 422; HLTH 301; HURL 497; ENGL 460 or ED 460; SPED 203; ED 421 and ED 431(co-requisites); ED 466 or ED 467. Admission to Teacher Education and a passing score on the MTLE Basic skills tests is required for placement in student teaching.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Many of the social studies licensure core courses may be used for the liberal education program.
- Program currently not enrolling new students.

Program Requirements

Social Studies Licensing Core: ANTH 250; ECON 201; GEOG 253, GEOG 270; HIST 140 or HIST 141, HIST 106 (global only), HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SPC 160; SST 253, SST 441, SST 453.
Social Science Core: Five courses from at least two of the following areas/departments: GEOG, POL, HIST, PSY, SST, ECON, SOC. Only one course may be at the 200 level, all others need to be at the 300/400 level. Courses cannot come from the Broad Field Licensure Area. All courses must be approved by the Social Studies Education program faculty.

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and national standards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

BS - Social Studies: Sociology *(24 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements
Social Studies Licensing Core: ANTH 250; ECON 201; GEOG 253, GEOG 270; HIST 140 or HIST 141, HIST 106 (global only), HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SOC 160; SST 253, SST 441, SST 453. Sociology Core: SOC 111 or SOC 160, SOC 201, SOC 268, SOC 302, SOC 303 (15); STAT 193.

Electives
SOC 273, SOC 355, or other course with approval of advisor (3 credits); 400 level SOC elective (3 credits).

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and nationalstandards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

Social Work

BS

Social Work
Chairperson: Patience Togo Malm
Address: 226 Stewart Hall
Phone: 320.308.3139
Email: socialwork@stcloudstate.edu
Website: www.stcloudstate.edu/socialwork

BS - Social Work *(64 credits)*
Admission Requirements

- GPA: 2.60
- (22 credits) Completion of the pre-professional core with a C- or better in each course: SW 195, SW 216, BIOL 103, HURL 201, HURL 206, PSY 240 or CPSY 262, SOC 160, STAT 193.

Notes

- Students must seek admission into the major during the semester that they are enrolled in SW 340.
- Students must earn a C- or better in every social work course.

Program Requirements
(42 credits) SW 330, SW 340, SW 345, SW 350, SW 360, SW 410, SW 411, SW 412, SW 442, SW 444, SW 445.

Electives

Students fulfill the University's Upper Division Writing Requirement by successfully completing SW 340 and SW 412.

Program Student Learning Outcomes

- Ability to implement the values and ethics of the social work profession.
- Ability to practice generalist social work effectively at all levels, incorporating systems theory and integrating a strengths perspective.
- Ability to practice without discrimination, and with respect, knowledge, and skills, related to clients' age, class, color, culture, disability, ethnicity, family structure, gender, marital status, national origin, race, religion, sex, and sexual orientation.
- Ability to understand the forms and means of oppression and discrimination, and advocate for social, economic, and political justice.
- Ability to use supervision, consultation, and collaboration to enhance social work practice within organizational structures and service delivery systems, as well as to seek necessary organizational change.
- Ability to analyze and formulate policy alternatives and understand how to influence social policies on all levels.
- Ability to apply research findings to practice and evaluate one's own practice interventions.
- Ability to know the history of the social work profession and understand its relationship to contemporary issues.
- Ability to use all modes of communication skillfully and demonstrate critical thinking skills in all professional encounters.

Master of Social Work (MSW)

Social Work

Chairperson: Patience Togo Malm
Address: 226 Stewart Hall
Phone: 320.308.3139
Email: socialwork@stcloudstate.edu
Website: www.stcloudstate.edu/socialwork

MSW - Social Work - Foundation *(59 credits)*

Admission Requirements

- GPA: 3.00
- Foundation students need a baccalaureate degree and prerequisite coursework. See Department website for further information regarding Foundation degree requirements.
- Submission of a current resume that addresses: education, position and responsibilities paid or unpaid, experience and community involvement that reflects frequency and duration of involvement.
- See Department website for specific requirements for the written essay.

Notes

- Foundation students will start in summer.

Plan A

Option(s): Thesis
Credits: 59
Core: 53 credits: SW 610, SW 611, SW 612, SW 613, SW 614, SW 615, SW 616, SW 618, SW 621, SW 622, SW 625, SW 626, SW 631, SW 634, SW 635, SW 636, SW 642, SW 645, SW 646, SW 650, SW 680
Electives:
Research: SW 699 (6 credits, no more than than 3 per semester)

Plan B

Option(s): Comprehensive Exam
Credits: 59
Core: 53 credits: SW 610, SW 611, SW 612, SW 613, SW 614, SW 615, SW 616, SW 618, SW 621, SW 622, SW 625, SW 626, SW 631, SW 634, SW 635, SW 636, SW 642, SW 645, SW 646, SW 650, SW 680
Electives: 6 credit minimum; Select from the following in consultation with Advisor: SW 517, SW 521, SW 681, SW 682, SW 683, SW 684
Research: Comprehensive Examination

Program Student Learning Outcomes

- Apply critical thinking skills within the context of professional social work practice.

- Understand the value base of the profession and its ethical standards and principles, and practice accordingly.
- Practice without discrimination and with respect, knowledge, and skills related to clients' age, class, color, culture, disability, ethnicity, family structure, gender, marital status, national origin, race, religion, sex, and sexual orientation. Understand the forms and mechanisms of oppression and discrimination and apply strategies of advocacy and social change that advance social and economic justice.
- Understand and interpret the history of the social work profession and its contemporary structures and issues.
- Apply the knowledge and skills of a social work perspective to practice with systems of all sizes.
- Use theoretical frameworks supported by empirical evidence to understand individual development and behavior across the life span and the interactions among individuals and between individuals and families, groups, organizations, and communities.
- Analyze, formulate, and influence social policies.
- Evaluate research studies, apply research findings to practice, and evaluate their own practice interventions. Use supervision and consultation appropriate to social work practice.
- Use communication skills differentially across client populations, colleagues, and communities.
- Function within the structure of organizations and service delivery systems and seek necessary organizational change.

MSW - Social Work-Advanced Standing *(32 credits)*

Admission Requirements

- GPA: 3.00
- See Department website for further information regarding Advanced Standing degree requirements.
- Submission of a current resume that addresses: education, position and responsibilities paid or unpaid, experience and community involvement that reflects frequency and duration of involvement.
- See Department website for specific requirements for the written essay.

Notes

- Advanced Standing students may begin in summer.
- Students whose BSW is greater than 5 years old must take SW 610.

Plan A
Option(s): Thesis
Credits: 32
Core: 26 credits: SW 618, SW 631, SW 634, SW 635, SW 636, SW 642, SW 645, SW 646, SW 650, SW 680
Electives:
Research: SW 699 (6 thesis credits, no more than 3 per semester)

Plan B
Option(s): Comprehensive Exam
Credits: 32
Core: 26 credits: SW 618, SW 631, SW 634, SW 635, SW 636, SW 642, SW 645, SW 646, SW 650, SW 680
Electives: Select 6 credits from the following in consultation with Advisor: SW 517, SW 521, SW 681, SW 682, SW 683, SW 684.
Research: Comprehensive Examination

Program Student Learning Outcomes

- Apply critical thinking skills within the context of professional social work practice.
- Understand the value base of the profession and its ethical standards and principles, and practice accordingly.
- Practice without discrimination and with respect, knowledge, and skills related to clients' age, class, color, culture, disability, ethnicity, family structure, gender, marital status, national origin, race, religion, sex, and sexual orientation. Understand the forms and mechanisms of oppression and discrimination and apply strategies of

advocacy and social change that advance social and economic justice.
- Apply the knowledge and skills of a social work perspective to practice with systems of all sizes.
- Apply the knowledge and skills of a social work perspective to practice with systems of all sizes.
- Use theoretical frameworks supported by empirical evidence to understand individual development and behavior across the life span and the interactions among individuals and between individuals and families, groups, organizations, and communities.
- Analyze, formulate, and influence social policies.
- Evaluate research studies, apply research findings to practice, and evaluate their own practice interventions. Use supervision and consultation appropriate to social work practice.
- Use communication skills differentially across client populations, colleagues, and communities.
- Function within the structure of organizations and service delivery systems and seek necessary organizational change.

Sociology

Sociology BA, BS and Minor

Sociology

Chair: Stephen Philion
Address: 262 Stewart Hall
Phone: 320.308.2294
Email: sociology@stcloudstate.edu
Website: www.stcloudstate.edu/sociology
Faculty: Sociology

BA - Sociology *(36 credits)*

Admission Requirements

- GPA: 2.0

Notes

- This major requires either one year in a single foreign language OR a minor.

Program Requirements

(18 credits): SOC 111 or SOC 160 (preferred), SOC 201, SOC 302, SOC 303, SOC 304, SOC 488. 9 credits from one of the four following areas: Social Problems, Deviance and Social Justice: SOC 211, SOC 362, SOC 366, SOC 367, SOC 368, SOC 374, SOC 460, SOC 473. Family, Health and Aging: SOC 273, SOC 276, SOC 350, SOC 355, SOC 365, SOC 374, SOC 412, SOC 472, SOC 475, other electives: SOC 310, SOC 366, SOC 400, SOC 460, SOC 462, SOC 473 with advisor approval. Political Economy of Society: SOC 273, SOC 345, SOC 355, SOC 362, SOC 389, SOC 455, SOC 456, SOC 460, other courses such as SOC 400, SOC 412, SOC 462, SOC 468, SOC 473, SOC 482 with advisor approval. Global Sociology: SOC 200, SOC 345, SOC 355, SOC 362, SOC 374, SOC 412, SOC 467, SOC 468, SOC 474, SOC 475, SOC 482, other courses such as SOC 400, SOC 460, SOC 462 with advisor approval.

Electives

9 credits of sociology emphasis and elective courses must be at 300/400-level and none may be at 100-level. ANTH 250 may be used for 3 elective credits with approval of advisor.

Students fulfill the University's Upper Division Writing Requirement by successfully completing SOC 488; SOC 480 may be substituted with approval of advisor (480 requires an applied project).

Program Student Learning Outcomes

- Students in the program will exhibit communication and research skills such that they will participate effectively in group processes and function as a working member of a team; be able to identify and describe major patterns in statistical or narrative data and understand how to use computer hardware and software to conduct online library searches, to conduct web searches, to enter information into databases, and to analyze statistical and narrative data.
- Students in the program will develop a sociological orientation, such that they will be familiar with the ethical standards of the discipline, as outlined in the ethics codes of the American Sociological Association and/or the Association for

Applied and Clinical Sociology and/or apply those ethical standards.
- Students in the program will be socially responsible citizens, such that they will be able to critically evaluate evidence and research about social conditions, express desire to change social conditions that they determine are unjust or oppressive and demonstrate an understanding of the importance of transnational/global perspectives.
- Students in the program will be familiar with the discipline of sociology, such that they will be able to describe what sociology is and how it differs from other social sciences; be able to describe and provide examples of the social construction of reality at the micro, meso, and macro levels of analysis and be able to adopt a sociological perspective toward a situation or problem and explain how this perspective is sociological.
- Students in the program will be familiar with sociological theory such that they will understand the value, as well as the limitations, of sociological theories as tools for examining issues & making recommendations for change; be able to describe, compare, apply, and/or critique sociological theories at the micro, meso, and macro level and be able to explain and provide examples of how theory influences practice and how practice influences theory.
- Students in the program will be familiar with research methods and their relationship to sociology, such that they will be able to describe, compare, and critique a wide range of research methods; be able to articulate and critically assess research questions by scholars and be able to use research methods as tools for action in various settings, including academic, work, or community settings.
- Students in the program will be familiar with how culture and social structure operate, such that they will be able to identify how institutions interlink in their effects on each other and on individuals; demonstrate how social relations and social structure vary across time and place, and the effect of such variations and identify forms and effects of institutional oppression locally and/or globally.
- Students in the program will be familiar with reciprocal relationships between individuals and society, such that they will be able to explain how the self develops sociologically; identify how social structure influences social processes and individual behavior and identify how social processes influence social structure: how individuals as social agents actively adapt, challenge, and transform social structure.
- Students in the program will be familiar with the internal diversity of U. S. society and its place in the international context, such that they will be able to describe the significance of variations by race, class, gender, etc.
- Through the substantive emphasis students in the program will be familiar with current policies and trends in social policy in the area and important theories, methods, and research in the area.

BA - Sociology - Concentration in Critical Applied Sociology *(45 credits)*

Admission Requirements

- GPA: 2.50

Notes

- SOC 488 is not a substitution except in rare exceptions with permission of advisor and waiver from director of program and willingness of the 488 instructor to supervise an applied project.

Program Requirements

Introductory Core: SOC 111 (preferred) or SOC 160; Theory Core: SOC 201, SOC 302, SOC 365; Methods Core: SOC 303, SOC 304, SOC 498; Meso Core: SOC 456 or SOC 460; Practice Core: SOC 444 (minimum 6 Cr., maximum 15 Cr.); Senior Seminar Core: SOC 480

Electives
Select 12 credits (9 credits at the 300-400 level): Electives must be approved by the advisor and Director to be counted towards completion of the concentration. No more than 3 credits can be taken outside of the SCSU sociology department and must be related to the program to be accepted. No more than 3 credits can be at the 100-200 level.

Students fulfill the University's Upper Division Writing Requirement by successfully completing SOC 480.

Program Student Learning Outcomes

- Discuss the role of theory in sociological practice, and the interaction between theory and practice.
- Discuss the roles of evidence as it relates to qualitative and quantitative methods in sociology.
- Will have skills needed in sociological practice.
- Be able to integrate academic studies with occupational realities through a practice experience.
- Guide sociological practitioners in their work with professional orientation and ethics provide standards and values.

BS - Social Studies: Sociology *(24 credits)*

Admission Requirements

- GPA: 2.50
- Completion of a minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU.
- Grades of "C" or better in ENGL 191 and CMST 192.

Notes

- Students selecting this major must complete the Liberal Education program, the Social Studies Licensing Core, one of the emphases in the B.S. Social Studies major designated for licensure and the Professional Education component.
- Many of the social studies licensure core courses may be used for the liberal education program.
- PSY 240 may be substituted for CPSY 262 in the education core. Please contact the social studies teaching program to set up an advising appointment if you have any questions.

Program Requirements
Social Studies Licensing Core: ANTH 250; ECON 201; GEOG 253, GEOG 270; HIST 140 or HIST 141, HIST 106 (global only), HIST 385; ETHS 310; POL 111, POL 251; PSY 240; SOC 160; SST 253, SST 441, SST 453. Sociology Core: SOC 111 or SOC 160, SOC 201, SOC 268, SOC 302, SOC 303 (15); STAT 193.

Electives
SOC 273, SOC 355, or other course with approval of advisor (3 credits); 400 level SOC elective (3 credits).

Program Student Learning Outcomes

- Students will evaluate the concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
- Students will demonstrate how to convert knowledge of specific content into organized curriculum and pedagogical methods to improve instruction for middle school and high school students.
- Students will assess state and nationalstandards and develop pedagogical methods to meet these.
- Students will critique and select/adapt Social Studies curriculum materials appropriate for various types of Social Studies instruction and assessment.
- Students will investigate appropriate instructional technologies and describe/demonstrate how to incorporate them into the classroom setting.
- Students will develop student assessment materials appropriate for various age groups and content areas.

Minor - Sociology *(21 credits)*

Program Requirements
SOC 111 or SOC 160, SOC 201, SOC 302.

Electives
12 Credits: 6 credits must be at 300/400-level and none may be at 100-level. ANTH 250 may be used for 3 elective credits.

Sociology: Interdepartmental BA

Sociology

Chair: Stephen Philion
Address: 262 Stewart Hall
Phone: 320.308.2294
Email: sociology@stcloudstate.edu
Website: www.stcloudstate.edu/sociology
Faculty: Sociology

BA - Sociology-Interdepartmental *(51 credits)*

Admission Requirements

- GPA: 2.50

Notes

- No minor is required with this major.

Program Requirements
SOC 111 or SOC 160, SOC 201, SOC 302, SOC 303, SOC 304, SOC 365, SOC 488.

Electives
30 credits: Sociology, 6 credits at 300/400-level. Interdepartmental, 24 credits from two or more programs outside sociology, including at least 12 credits from one program.

Students fulfill the University's Upper Division Writing Requirement by successfully completing SOC 488.

Program Student Learning Outcomes

- Identify the links between their substantive areas of interest and sociology.
- Apply sociological theories, methods and research to their areas of interest.

Special Education

BS and Minor

Special Education

Chairperson: Bradley Kaffar
Address: A211 Education Building
Phone: 320.308.2041
Email: sped@stcloudstate.edu
Website: www.stcloudstate.edu/sped

BS - Special Education: Academic and Behavioral Strategist *(57 credits)*

Admission Requirements

- GPA: 2.75
- Overall grade point average of 2.75 or higher in courses taken at SCSU at the time the application to major.
- Completion of prerequisite courses: CEEP 262, ED 200 or SPED 200 or CFS 200, MATH 301, SPED 203, SPED 420, SPED 421, SPED 431.

Program Requirements
Core (12 credits): SPED 203 (counts as Diversity) SPED 420, SPED 421, SPED 431. General Education Block (16 credits): SPED 338, SPED 339, SPED 405, SPED 415, SPED 418, SPED 445. Special Education Block (15 credits): SPED 411, SPED 416, SPED 419, SPED 440, SPED 455. Student Teaching Semester (16 credits): SPED 490, SPED 452, SPED 456, SPED 457. Special licensure requirements: ED 200 or SPED 200 or CFS 200, CEEP 262, CEEP 361, HURL 497, HURL 498, IM 422 (competencies required - see IM section), and MATH 301.

Program Student Learning Outcomes

- Understands the central concepts, tools of inquiry and history and context of developmental disabilities as a foundation on which to base practice.
- Understands referral, assessment, planning, and placement procedures specific to teaching student with developmental disabilities.
- Understands how to use individual education plans to design and implement developmentally appropriate instruction for students with developmental disabilities.
- Communicates and interacts with students, families, other teachers, and the community to support student learning and well-being.

- Applies the standards of effective practice in teaching students with developmental disabilities through a variety of early and ongoing clinical experiences.

Minor - Special Education *(19 credits)*

Notes

- Minnesota Teacher Licensure Exam: Basic Skills Examination required for 400-level classes.

Program Requirements

SPED 203 (part of Elementary Education requirements), SPED 405, SPED 419 (prerequisite needed), SPED 421. Two SPED Electives: SPED 411, SPED 415, SPED 416, SPED 420, SPED 431, SPED 445. Minnesota Teacher Licensure Exam: Basic Skills required for 400-level classes.

MS

Special Education

Chairperson: Bradley Kaffar
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Email: sped@stcloudstate.edu
Website: www.stcloudstate.edu/sped

MS - Special Education *(30-33 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is required with a score in the 25th percentile or higher. See program website for exceptions.

Plan A

Option(s): Thesis
Credits: 30
Core: 9 credit minimum: SPED 503, SPED 505, SPED 511, SPED 513, SPED 516, SPED 518, SPED 519, SPED 520, SPED 521, SPED 531, SPED 545, SPED 552, SPED 656, SPED 657, SPED 659, SPED 660, SPED 661, SPED 669, SPED 670, SPED 671, SPED 679, SPED 680, SPED 681, SPED 623, SPED 628, SPED 629, Professional Education Courses, 3 credit minimum selected with advisor.
Electives: 3 credits: SPED 690, SPED Non-licensure elective.
Research: 15 credit minimum: CEEP 678, SPED 601, SPED 602, SPED 699.

Plan B

Option(s): Starred Paper(s)
Credits: 33
Core: 18 credit minimum: SPED 503, SPED 505, SPED 511, SPED 513, SPED 516, SPED 518, SPED 519, SPED 520, SPED 521, SPED 531, SPED 545, SPED 552, SPED 556, SPED 557, SPED 659, SPED 660, SPED 661, SPED 669, SPED 670, SPED 671, SPED 679, SPED 680, SPED 681, SPED 623, SPED 628, SPED 629, Professional Education Courses, 3 credit minimum selected with advisor.
Electives: 3 credits: SPED 690, SPED Non-licensure elective
Research: 9 credit minimum: CEEP 678, SPED 601, SPED 602.

Program Student Learning Outcomes

- Understands the central concepts, tools of inquiry and history and context of developmental disabilities as a foundation on which to base practice.
- Understands referral, assessment, planning, and placement procedures specific to teaching student with developmental disabilities.
- Understands how to use individual education plans to design and implement developmentally appropriate instruction for students with developmental disabilities.
- Communicates and interacts with students, families, other teachers, and the community to support student learning and well-being.
- Applies the standards of effective practice in teaching students with developmental disabilities through a variety of early and ongoing clinical experiences.

Certificates

Special Education

Chairperson: Bradley Kaffar
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Certificate - Autism *(9 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required
- 2.75 GPA over the last two years of undergraduate program.

Program Requirements
SPED 623, CSD 624, CPSY 627

Program Student Learning Outcomes

- A teacher of special education: autism spectrum disorders understands the foundations of special education services for students with autism spectrum disorders on which to base practice.
- A teacher of special education: autism spectrum disorders understands and applies principles of prevention and intervening early and procedures for referral, assessment, evaluation, individualized planning, programming, and placement specific to teaching students with autism spectrum disorders.
- A teacher of special education: autism spectrum disorders understands how to use individualized education program plans to design, implement, monitor, and adjust instruction for students with autism spectrum disorders.
- A teacher of special education: autism spectrum disorders cultivates and maintains positive, collaborative relationships with children and youth, families, educators, other professionals, and the community to support development and educational progress.
- A teacher of special education: autism spectrum disorders applies the standards of effective practice through a variety of early and ongoing clinical experiences in teaching children and youth with autism spectrum disorders in birth through preschool, primary (kindergarten through grade 4), and secondary (grades 5 through 12, including transition programs) settings across a range of service delivery models.

Certificate - Academic and Behavioral Strategist *(31-70 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- 2.75 GPA over the last two years of undergraduate program.

Notes

- All students seeking licensure must complete student teaching in elementary and secondary classrooms.
- See department website for information regarding student teaching as well as licensed and unlicensed candidates.

Program Requirements
This program provides coursework leading to eligibility for a graduate certificate that leads to teacher licensure. 22 credits: SPED 503, SPED 505, SPED 511, SPED 515, SPED 516, SPED 519, SPED 531, SPED 552. Specialization (12 credits): SPED 520, SPED 521, SPED 552, SPED 656, SPED 657. Additional Requirements for Students with a Non-Teaching Degree (39 credits): ED 200 or SPED 200 or CFS 200, SPED 440, SPED 338, SPED 339, SPED 455, SPED 513, SPED 518, SPED 545, CEEP 262, CEEP 361, HURL 597 and HURL 598, IM 522.

Program Student Learning Outcomes

- Understands the central concepts, tools of inquiry and history and context of developmental disabilities as a foundation on which to base practice.
- Understands referral, assessment, planning, and placement procedures specific to teaching student with developmental disabilities.
- Understands how to use individual education plans to design and implement developmentally appropriate instruction for students with developmental disabilities.
- Communicates and interacts with students, families, other teachers, and the community to support student learning and well-being.

- Applies the standards of effective practice in teaching students with developmental disabilities through a variety of early and ongoing clinical experiences.

Certificate - Autism Spectrum Disorders *(32-38 credits)*

- Admission RequirementsThe GRE is not required.
- 2.75 GPA over the last two years of undergraduate program.

Notes

- All students seeking licensure must complete a practicum in their chosen area(s).
- See department website for information regarding practicums as well as licensed and unlicensed candidates.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate that leads to teacher licensure. Core (19 credits): SPED 505, SPED 511, SPED 515, SPED 516, SPED 519, SPED 531. Specialization (13 credits): SPED 623, CSD 624, CPSY 627, SPED 628, SPED 629. Additional Requirements for Students with Secondary and K-12 Licenses: SPED 513, SPED 518.

Program Student Learning Outcomes

- A teacher of special education: autism spectrum disorders understands the foundations of special education services for students with autism spectrum disorders on which to base practice.
- A teacher of special education: autism spectrum disorders understands and applies principles of prevention and intervening early and procedures for referral, assessment, evaluation, individualized planning, programming, and placement specific to teaching students with autism spectrum disorders.
- A teacher of special education: autism spectrum disorders understands how to use individualized education program plans to design, implement, monitor, and adjust instruction for students with autism spectrum disorders.
- A teacher of special education: autism spectrum disorders cultivates and maintains positive, collaborative relationships with children and youth, families, educators, other professionals, and the community to support development and educational progress.
- A teacher of special education: autism spectrum disorders applies the standards of effective practice through a variety of early and ongoing clinical experiences in teaching children and youth with autism spectrum disorders in birth through preschool, primary (kindergarten through grade 4), and secondary (grades 5 through 12, including transition programs) settings across a range of service delivery models.

Certificate - Developmental Disabilities *(32-38 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- 2.75 GPA over the last two years of undergraduate program.

Notes

- All students seeking licensure must complete a practicum in their chosen area(s).
- See department website for information regarding practicums as well as licensed and unlicensed candidates.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate that leads to teacher licensure. Core (19 credits): SPED 505, SPED 511, SPED 515, SPED 516, SPED 519, SPED 531. Specialization (13 credits): SPED 520, SPED 659, SPED 660, SPED 661, CPSY 630. Additional Requirements for Students with Secondary and K-112 Licenses: SPED 513, SPED 518.

Program Student Learning Outcomes

- Understands the central concepts, tools of inquiry and history and context of developmental disabilities as a foundation on which to base practice.
- Understands referral, assessment, planning, and placement procedures specific to teaching student with developmental disabilities.
- Understands how to use individual education plans to design and implement developmentally appropriate instruction for students with developmental disabilities.
- Communicates and interacts with students, families, other teachers, and the community to support student learning and well-being.
- Applies the standards of effective practice in teaching students with developmental disabilities through a variety of early and ongoing clinical experiences.

Certificate - Emotional/Behavioral Disorders *(32-38 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required
- 2.75 GPA over the last two years of undergraduate program.

Notes

- All students seeking licensure must complete a practicum in their chosen area(s).
- See department website for information regarding practicums as well as licensed and unlicensed candidates.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate that leads to teacher licensure. Core (19 credits): SPED 505, SPED 511, SPED 515, SPED 516, SPED 519, SPED 531. Specialization (13 credits): SPED 521, SPED 669, SPED 670, SPED 671, CPSY 684. Additional Requirements for Students with Secondary and K-12 Licenses: SPED 513, SPED 518.

Program Student Learning Outcomes

- Understands the central concepts, tools of inquiry and history and context of developmental disabilities as a foundation on which to base practice.
- Understands referral, assessment, planning, and placement procedures specific to teaching student with developmental disabilities.
- Understands how to use individual education plans to design and implement developmentally appropriate instruction for students with developmental disabilities.
- Communicates and interacts with students, families, other teachers, and the community to support student learning and well-being.
- Applies the standards of effective practice in teaching students with developmental disabilities through a variety of early and ongoing clinical experiences.

Certificate - Learning Disabilities *(32-38 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- 2.75 GPA over the last two years of undergraduate program.

Notes

- All students seeking licensure must complete a practicum in their chosen area(s).
- See department website for information regarding practicums as well as licensed and unlicensed candidates.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate that leads to teacher licensure. Core (19 credits): SPED 505, SPED 511, SPED 515, SPED 516, SPED 519, SPED 531. Specialization (13 credits): SPED 521, SPED 679, SPED

680, SPED 681, ED 647. Additional Requirements for Students with Secondary and K-12 Licenses: SPED 513, SPED 518.

Program Student Learning Outcomes

- Understands the central concepts, tools of inquiry and history and context of developmental disabilities as a foundation on which to base practice.
- Understands referral, assessment, planning, and placement procedures specific to teaching student with developmental disabilities.
- Understands how to use individual education plans to design and implement developmentally appropriate instruction for students with developmental disabilities.
- Communicates and interacts with students, families, other teachers, and the community to support student learning and well-being.
- Applies the standards of effective practice in teaching students with developmental disabilities through a variety of early and ongoing clinical experiences.

Special Studies

MA and MS

Special Studies

Contact: Melanie Guentzel, Director of Graduate Student Services
Address: 121 Administrative Services
Phone: 320.308.2194
Email:mjguentzel@stcloudstate.edu**Website:**http://www.stcloudstate.edu/gradadmissions/

MA - Special Studies *(30-36 credits)*

Admission Requirements

- GPA: 2.75
- GRE or GMAT required
- Official test scores must be submitted before an admission conference can be held.
- The GRE or GMAT is waived for individuals with a post-baccalaureate degree from an accredited institution in a country where English is the sole official language.

Notes

- See School of Graduate Studies for requirements.

Plan A
Option(s): Thesis | Creative Work
Credits: 30
Core: To be determined by committee
Electives:
Research: 699

Plan B
Option(s): Starred Paper(s) | Comprehensive Exam
Credits: 32
Core: To Be Determined by Committee
Electives:
Research:

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: To be determined by committee
Electives:
Research:

MS - Special Studies *(30-36 credits)*

Admission Requirements

- GPA: 2.75
- GRE or GMAT required
- Official test scores must be submitted before an admission conference can be held.
- The GRE or GMAT is waived for individuals with a post-baccalaureate degree from an accredited institution in a country where English is the sole official language.

Notes

- See School of Graduate Studies for requirements.

Plan A
Option(s): Thesis
Credits: 30

Core: To be determined by committee
Electives:
Research: 699

Plan B
Option(s): Starred Paper(s) | Comprehensive Exam
Credits: 32
Core: To Be Determined by Committee
Electives:
Research:

Plan C
Option(s): Portfolio/Project
Credits: 36
Core: To be determined by committee
Electives:
Research:

Teacher Development

Elementary Education BS

Teacher Development

Chairperson: Jennifer Jay
Address: A132 Education Building
Phone: 320.308.3007
Email: tdev@stcloudstate.edu
Website: www.stcloudstate.edu/ed

BS - Elementary Education (K-6) *(89 credits)*

Admission Requirements

- GPA: 2.75
- 2.75 GPA or higher overall.
- Minimum of 36 semester hours, with at least 12 semester hours in residence at SCSU, and completion of the NES Basic Skills Tests or equivalent.
- C (not C-) or better in ENGL 191, CMST 192, ED 200, and in each completed course required for the major.

Notes

- SPED 203, MATH 201, and CPSY 262 count in Liberal Education.

Program Requirements
89 credits: ED 200, ED 304, ED 305, ED 310, ED 315, ED 362, ED 404, ED 405, ED 406, ED 407, ED 408, ED 409, ED 411, ED 412, ED 414, ED 420, ED 422. ED 462, MATH 201, MATH 301, SCI 226, SCI 227, SST 320, ART 396, MUSE 201, IM 421, CPSY 361, CPSY 262, SPED 203, PESS 398, HLTH 301, HURL 497, HURL 498.

Electives
Students fulfill the University's Upper Division Writing Requirement by successfully completing and receive a passing grade on a foundations paper. The paper is to be completed during the Foundation of Education course, ED 414.

Program Student Learning Outcomes

- The teacher designs and implements developmentally appropriate learning experiences that promote curiosity, democratic values, love of learning, classroom community, and respect for others from different cultures, ethnicities, races, religions, and backgrounds.
- The teacher demonstrates understanding of individual differences and diverse cultures and communities by ensuring inclusive learning environments that enable each learner to meet high standards that require students to think, collaborate, and consider multiple perspectives and that encourage positive social interaction, active engagement in learning, and self motivation.
- The teacher organizes the classroom in ways that promote student efficacy, voice, ownership of learning, and responds to cultural differences driven by poverty in ways that build student abilities to negotiate social and academic structures.
- The teacher creates learning experiences through selection of resources or media that make the central concepts, tools of inquiry, and structures of the discipline(s) accessible and meaningful for learners to assure mastery of the content.
- The teacher plans instruction that supports every student in meeting learning goals by drawing upon knowledge of content areas, state and local standards, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

- The teacher encourages learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways by using a variety of instructional strategies.
- The teacher constructs and uses multiple methods of assessment to capture intellectual and affective growth, engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.
- The teacher interprets testing mandates and data with an understanding of the limitations of these instruments and recognition that not all learning can be described with numbers.
- The teacher continually evaluates his/her practice and adapts practice using evidence to meet the needs of each learner.

Minor - Social Studies - Elementary Education *(18 credits)*

Program Requirements

One course from six of the following eight areas/departments: ANTH, ECON, GEOG, HIST, SSCI, SOC, POL, PSY. Four courses must be at the 200-400 level (Cannot use SSCI 320).

Curriculum and Instruction MS

Teacher Development

Chairperson: Jennifer Jay
Address: A132 Education Building
Phone: 320.308.3007
Email: tdev@stcloudstate.edu
Website: https://www.stcloudstate.edu/graduate/curriculum-instruction/default.aspx

MS - Curriculum and Instruction *(30-36 credits)*

Admission Requirements

- GPA: 2.75
- The GRE is not required.
- A baccalaureate degree from an accredited institution is required.

Notes

- An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution.
- SCSU's Curriculum & Instruction master's degree is not a licensure program. See SCSU's Curriculum & Instruction master's degree website regarding a licensure program. If students are seeking initial licensure in either elementary education or secondary/K-12 education, they will need to complete SCSU's undergraduate licensure program.

Plan A

Option(s): Thesis
Credits: 30
Core: 9 credit minimum: ED 647, ED 654, ED 611 or ED 612
Electives: 9 credit minimum selected in consultation with advisor.
Research: 12 credit minimum ED 610, ED 699. Select 6 credits from the following: ED 614, ED 615, CEEP 675, CEEP 678, ANTH 530, or other with approval of advisor.

Plan B

Option(s): Starred Paper(s)
Credits: 33
Core: 9 credit minimum. ED 647, 654 (required), ED 611 or ED 612
Electives: 18 credit minimum selected in consultation with advisor.
Research: 6 credit minimum. ED 610, ED 698

Plan C

Option(s): Portfolio/Project
Credits: 36
Core: 9 credit minimum: ED 647. REQUIRED: ED 654. REQUIRED: Foundations ED 611 OR ED 612
Electives: 24 credit minimum selected in consultation with advisor.
Research: 3 credit minimum: ED 610

Certificates

Teacher Development

Chairperson: Jennifer Jay
Address: A132 Education Building
Phone: 320.308.3007

Email: tdev@stcloudstate.edu
Website: www.stcloudstate.edu/ed

Certificate - Reading Teacher K - 12 *(15 credits)*

Admission Requirements

- GPA: 2.75
- For admission consideration to the program, a candidate must first meet the minimum GPA admission requirements of the School of Graduate Studies at St. Cloud State University
- The GRE is not required.
- A baccalaureate degree in elementary education, secondary education, special education, or English language learning (ELL) from an accredited college or university.

Notes

- One year of teaching experience is strongly recommended before coursework begins.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate. ED 616, ED 617, ED 618, ED 619, ED 620.

Certificate - Teacher Leader *(18 credits)*

- Admission RequirementsThe GRE is not required.
- A baccalaureate degree in a teacher education program from an accredited teacher preparation institution is required.
- This program is currently not accepting new students.

Program Requirements

This program provides coursework leading to eligibility for a graduate certificate. CFS 605, ED 671, ED 682, EDAD 633, HURL 681, SPED course to be determined.

Electives

ED 614, ED 559, ED 654, EDAD 603, EDAD 650

Theatre & Film Studies

Film Studies BA and Minor

Theatre and Film Studies

Chairperson: Christopher Jordan
Address: 202 Performing Arts
Phone: 320.308.3229
Email: theatrefilmdance@stcloudstate.edu
Website: www.stcloudstate.edu/theatrefilmdance

BA - Film Studies *(41 credits)*

Notes

- This major requires either one year in a single foreign language OR a minor.
- *See course descriptions for repeatability limits.

Program Requirements

29 credits: FS 175, FS 260, FS 270, FS 294, FS 394, FS 395, FS 451, FS 452, FS 496.

Electives

Select 12 credits from: FS 264*, FS 360, FS 370, FS 394*, FS 395*, FS 401*, FS 464*, FS 470*, FS 474*, FS 490, FS 491.

Students fulfill the University's Upper Division Writing Requirement by successfully completing FS 496.

Program Student Learning Outcomes

- Students will be able to correctly use film terminology and the tools of objective description.
- Students will be able to conceptualize and create films from the perspectives of image, story telling, and emotion.
- Students will be able to write critically about the cinema from a multicultural and global perspective.
- Students will be able to analyze and write critically about film from a cultural and ideological perspective.
- Students will be able to describe major historical landmarks in the development of cinema and conduct historical research.
- Students will be able to recognize major theoretical and aesthetic paradigms.

Minor - Film Studies *(25 credits)*

Notes

- *See course descriptions for repeatability limits.

Program Requirements
FS 175, FS 260, FS 294 plus one of these: FS 451, FS 452, FS 453.

Electives
Select 12 credits from: FS 264*, FS 270, FS 370, FS 394*, FS 395, FS 401*, FS 451, FS 452, FS 453, FS 464*, FS 470*, FS 474*, FS 490, FS 491.

Program Student Learning Outcomes

- Students will be able to correctly use film terminology and the tools of objective description.
- Students will be able to conceptualize and create films from the perspectives of image, story telling, and emotion.
- Students will be able to write critically about the cinema from a multicultural and global perspective.
- Students will be able to analyze and write critically about film from a cultural and ideological perspective.
- Students will be able to recognize major theoretical and aesthetic paradigms.
- Students will be able to describe major historical landmarks in the development of cinema and conduct historical research.

Minor - Film Production *(19-24 credits)*

Admission Requirements

- GPA: 2.0

Program Requirements
(16-20 credits) FS 270. Select one course from: FS 175, FS 260, FS 294, FS 395. Select three courses from: FS 360, FS 370, FS 470, FS 474. Repeatable courses can count more than once for the three. Students may substitute TH 248 or TH 349 for one of the three with advisor's permission. Theatre courses may not count as both a requirement and an elective.

Electives
(3-4 credits) Select one course from: ART 105, ART 389, ART 383, COMM 270, COMM 277, COMM 373, ENGL 340, ENGL 341, ENGL 342, ENGL 343, ENGL 344, CMST 210, CMST 310, CMST 410, TH 237, TH 238, TH 242, TH 248, TH 258, TH 349, MUSM 433, MUSM 434, MUSM 438, MUSM 437, FS 490, FS 491.

Theatre BA and Minor

Theatre and Film Studies

Chairperson: Christopher Jordan
Address: 202 Performing Arts
Phone: 320.308.3229
Email: theatrefilmdance@stcloudstate.edu
Website: www.stcloudstate.edu/theatrefilmdance

BA - Theatre *(40 credits)*

Admission Requirements

- GPA: 2.5
- Students must enroll in theatre courses and participate in the production season.

Notes

- A minor in another discipline is required.

Program Requirements
40 credits: TH 180, TH 238, TH 237, TH 148 or TH 248, TH 231, TH 225 (must be repeated for a total of 2 credits), TH 242, TH 258, CMST 210, TH 349, TH 479, TH 385, TH 485, TH 325 (at least 1 credit is required) or TH 326. (Either TH 325 or TH 326 are co-requisites of TH 385 and TH 485).

Electives
Electives are not required but will be offered on Demand.

The Upper Division Writing Requirement is met by completing TH 485.

Minor - Theatre *(19 credits)*

Program Requirements
19 credits: TH 180; TH 231; TH 237 or TH 238; TH 148 or TH 248 or CMST 210; TH 242 or TH 258; TH 349 or TH 385; TH 225.

Program Student Learning Outcomes

- Students will critically analyze scripts or productions using appropriate theatre terminology. Students will be able to describe and demonstrate the process of creating a character on stage through practical, hands-on experiences.
- Students will direct actors in scenes or plays using appropriate methodologies and techniques.
- Students will utilize discipline-appropriate research methods and be able to discuss and write about events in theatre history and trends in dramatic criticism.
- Students will utilize discipline-appropriate research methods and be able to discuss and write about events in theatre history and trends in dramatic criticism.
- Students will be able to construct and implement theatrical designs proficiently using current methods and technologies.
- Students will utilize discipline-appropriate research methods and be able to discuss and write about events in theatre history and trends in dramatic criticism.
- Students will critically analyze a piece of dramatic literature using a variety of processes for the purposes of directing, designing, or acting.
- Students will employ the basic principles behind vocal techniques, such as proper breathing, projection, articulation, vocal expressiveness, and coordination between movement and sound.
- Students will develop physical awareness of their bodies and employ technical skills through working with space, movement, and rhythm.
- Students will employ the appropriate techniques of visual rendering to communicate their designs and interpretations of plays. Students will identify major trends and landmark plays from those trends and describe the characteristics of the trends and the plays.

School of the Arts (SOTA)

School of the Arts (SOTA)

Chairperson: Christopher Jordan
Address: 202 Performing Arts
Phone: 320.308.3229
Email: theatrefilmdance@stcloudstate.edu
Website: www.stcloudstate.edu/theatrefilmdance

Minor - Arts Entrepreneurship *(18 credits)*

Admission Requirements

- GPA: 2.5
- Must be admitted to a major in one of these three departments: Art, Music, Theatre and Film Studies.
- None

Program Requirements
15 credits: SOTA 101, ACCT 291, MKTG 320, MGMT 364, and SOTA 401.

Electives
3 credits: Choose one from MGMT 368, MGMT 462, MKTG 321, MKTG 419, BLAW 235, BLAW 433

Traffic Safety

Certificate and Graduate Tracks leading to Licensure

Traffic Safety

Contact: Mark Lee
Address: 115M Brown Hall
Phone: 320.308.3081
Email:mdlee@stcloudstate.edu
Website:www.stcloudstate.edu/continuingstudies**Faculty:** Mark Lee

Certificate - Traffic Safety Education *(13 credits)*

Admission Requirements

- GPA: 2.75
- The GRE examination is not required.
- A baccalaureate degree from an accredited institution is required..
- A current teaching license is required for all applicants to the TSE graduate certificate program

Program Requirements
This program provides coursework leading to eligibility for a graduate certificate. 13 credits: TSE 540, TSE 550, TSE 570, TSE 580, TSE 590.

Licensure - Minnesota Teaching Licensure (Driver Education) *(13 credits)*

- Admission RequirementsA current teaching license is required.

Program Requirements
TSE 540, TSE 550, TSE 570, TSE 580, TSE 590

Interdisciplinary Programs

All University Courses

All University Courses: Undergraduate

Educational Tours

410-510. Educational Tours. (Name of dept. or program)
Tours taken under supervision of the university. Exact nature of course will be defined by the department involved and approved by the vice president for academic affairs. Considered residence credit. 1-6 Cr.

Experimental Courses

SCSU may decide to offer a number of new courses on an experimental basis. These courses will not be listed in the course catalog. Courses are listed in the semester class schedule and course descriptions are available from the Office of Academic Affairs (AS 209) and the appropriate department office.

Independent Study

199-499. Independent Study. (Name of dept. or program)
Offered at the discretion of departments, this program is intended for the very able, motivated student whose intellectual needs are partially served by serious independent study. Permission of instructor required. May be repeated. 1-3 Cr.

Internships

444. Internships
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program. 1-16 Cr.

Short Courses

196. Short Courses. (Name of dept. or program)
Specific subjects selected to meet educational needs. Exact nature of course will be defined by the department. 1-3 Cr.

Special Problems

400. Special Problems. (Name of dept. or program)
A seminar or conference course for advanced students wishing to work out a special problem in the academic area. 1-3 Cr.

Television

488. (Name of dept. or program)
Exact nature of the course to be offered on television will be defined by the department. 1-3 Cr.

Workshops

495-595. Workshop. (Name of dept. or program)
Specific subjects selected to meet special educational needs, offered in a format different from the typical scheduled course. Exact nature of the course will be defined by the department. 1-3 Cr.

All University Courses: Graduate

Course Numbering System

Courses numbered at the 500- and 600-level may be used to satisfy requirements in the master's degree programs. A minimum of 50 percent of the student's approved program of study must be at the 600-level.

500-level courses

Graduate courses numbered 500 to 599 are double-numbered with courses in the 400 to 499 series and are open to graduate students. Courses at the 500 level concurrently offered with undergraduate courses will include additional graduate-level assignments, generally in the form of an advanced paper or project, additional reading assignments, and examinations.

600-level courses

Graduate courses at the 600 level are available to graduate students only. Undergraduate students may not register for or attend 600-level courses.

Credit by Arrangement — 501

Under certain circumstances, upper division courses (300- or 400-level) may be applied to master's degree requirements. To obtain approval, the student must submit a petition approved by the adviser to the graduate dean prior to registering for the course, if the course has not been approved on the proposed program of study.

An "Approval Form for Independent Study" approved by the professor, the department chairperson and the graduate dean is needed to register for the course. The student also must make arrangements to complete the special graduate requirements of the course.

Students who receive approval must register for (name of department or program) 501 (title of course). A maximum of six credits earned under the

501 course number may be applied to a master's degree program. This procedure is open only to students admitted to a graduate degree program.

Educational Tours — 510
Educational tours are taken under supervision of the University. The exact nature of the course is defined by the department or program involved, subject to approval of the administration. One to six credits.

Workshops — 588, 595 and 695
Workshops are of two types:

Continuing education 588
These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.

Established degree programs 595 and 695
These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option. (See Workshop Limitation under Academic Policies).

Independent Study — 600
Independent Study is available for advanced students wishing to work out a special problem in the major area of concentration. May be repeated to a maximum of three credits. One to three credits.

Enrollment Continuation — 691
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Credit: 1. Repeatable to 10 credits. Grading: no grade. Semesters to be offered: Fall, Spring, Summer

Selected Topics - 694
Select special title for each offering. May be repeated to a maximum of six credits. One to three credits per course.

Creative Work — 698
Students whose culminating experience is a creative work will use the course number 698 and their department's abbreviation (example: MUS) to register. Six credits. May be registered for in one to six credit blocks with approval of adviser. S/U grading is required.

Thesis — 699
Students whose culminating experience is a thesis will use the course number 699 and their department's abbreviation (example: HIST, IM) to register. Six credits. May be registered for in one to six credit blocks with approval of adviser. S/U grading is required.

Selected Topics -- 790-795
Under certain circumstances, master's only courses (600 level) may be applied to doctoral degree requirements. To obtain approval, the student must submit a petition approved by the adviser to the graduate dean prior to registering for the course, if the course has not been approved on the proposed program of study.

An "Approval Form for Individual Study" approved by the professor, the adviser, the department chairperson and the graduate dean is needed to register for the course. The student also must make arrangements to complete the special doctoral level requirements of the course.

Students who receive approval must register for (name of department or program) 790 - 795 (title of course). This procedure is open only to students admitted to a doctoral program. One to three credits. May be repeated up to 6 credits.

Independent Study — 890
Independent study for doctoral students wishing to work out a special problem in the major area of concentration. May be repeated to a maximum of six credits. One to three credits. May be repeated up to 6 credits.

Enrollment Continuation — 891
Intended for doctoral students who have completed all required coursework for a program, but are still working on the dissertation or doctoral field study. Credit: 1. Repeatable to 10 credits. Grading: no grade. Semesters to be offered: Fall, Spring, Summer

Dissertation — 899

Guidance by the major adviser for dissertation writing, including preparation of the proposal, preliminary presentation to the committee, and final oral presentation to the committee. One to nine credits. 12 credits required for degree.

Undergraduate Courses

100-400 level

Accounting (ACCT)

ACCT 291 Accounting I

Accounting as a process of providing useful financial information to investors, creditors, management, and other users. The accounting process, financial statements, and the uses and limitations of accounting information.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Prepare and use a balance sheet, income statement, and statement of stockholders' equity given transaction data and/or account balance data.
2. Predict the effect of business transactions on financial statements.
3. Calculate the effect of expense and revenue recognition on income statement values through the application of generally accepted accounting principles.
4. Calculate balance sheet values through the application of generally accepted accounting principles.

ACCT 292 Accounting II

The statement of cash flows and financial statement analysis. Accounting information as a planning, analysis, and control tool facilitating decision-making.
Prereq.: ACCT 291 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Calculate and classify cash flows for the statement of cash flows using both the direct and indirect methods given transaction data and/or account balance data.
2. Compute and use financial ratios, given a company's annual report information.
3. Calculate and interpret costs associated with manufacturing operations in the areas of: *identifying and calculating product costs, inventory costs, cost of goods manufactured, and cost of goods sold *analyzing cost behavior.
4. Apply accounting information to managerial decision in the areas of: *budgeting *variance analysis *cost-volume-profit analysis *other management decisions, for example, make/buy, special order, and process further.

ACCT 294 Excel Certification Boot Camp

Compressed-format course that prepares students to become Microsoft-certified in Excel.
1 Cr. DEMAND

Student Learning Outcomes

1. Create and manipulate both numeric and text data.
2. Format both numeric and text data.
3. Create and modify formulas including macros, functions, and advanced features.
4. Use graphing functions to present data visually.
5. Perform procedures to share data while maintaining the security of the data.

ACCT 295 Accounting Boot Camp

Fast-paced review of financial accounting. Will not count as new course credit for CPA licensure.
Prereq.: ACCT 291 or equivalent. 1 Cr. Fall | Spring

Student Learning Outcomes

1. Perform bookkeeping procedures for a small business, including journal entries, adjustments, and closing entries.
2. Create financial statements from ledger accounts.
3. Calculate time value of money problems.
4. Evaluate decisions about accounting choices with respect to excessive earnings management.

ACCT 304 Internal Audit 1

Nature of internal and operational auditing, performance of an operational audit.
Prereq.: ACCT 292 3 Cr. DEMAND

Student Learning Outcomes

1. Students will be able to recognize and discuss the role internal auditors play in industry, government, and private organizations and how they fit into the governance process within these organizations.
2. Students will be able to use research strategies to find internal audit standards, guidelines, and emerging issues and the relationship to relevant laws and regulations.
3. Students will be able to evaluate processes within organizations that are prone to control issues and identify the implications for resource allocation.
4. Students will be able to identify the roles and responsibilities within an organization with respect to internal controls.
5. Students will be able to describe how technology fits into the control environment.
6. Students will be able to describe fraud risks and identify related controls.

7. Students will be able to demonstrate the internal audit process and how the assurance engagement is conducted.

ACCT 344 Field Experience

Participation in a paid part-time position with a cooperating business, governmental, or civic organization. May be enrolled in no more than 10 additional credits. May be repeated up to 6 credits. Student must enroll in at least one on campus class after the field experience. Permission of department.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Describe skills he/she hopes to acquire from a work experience in his/her major.
2. Apply professional work skills during work experience.
3. Summarize and evaluate his/her work assignments with respect to skills learned.
4. Report their experiences through a presentation to other students in his/her major.

ACCT 371 Financial Accounting and Analysis

Financial statement measurement and derivation. Develop an in-depth understanding of financial statement concepts such as revenue recognition, cash flows, assets, liabilities, shareholders' equity, revenue, and expenses.
Prereq.: ACCT 292 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Prepare and interpret the income statement, balance sheet, and statement of cash flows.
2. Determine the effects of transactions on a business entity's financial statements. This will include transactions for the following topics: a) cash and receivables, b) inventory, c) property, plant and equipment, d) intangible assets, e) current and long-term liabilities, f) stockholders' equity, g) leases, and h) pensions

ACCT 381 Intermediate Accounting I

Financial accounting, standard-setting, and the basic financial statements. Current and long-term assets, and current liabilities.
Prereq.: 3.0 GPA in ACCT 291 or ACCT 292 or dept permission 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Examine and describe the objectives of financial reporting, the standard setting process, and the conceptual framework underlying financial accounting.
2. Measure amounts for transactions, record transactions, and describe disclosure under GAAP for the following financial statement topics: a) cash and receivables, b) inventory, c) property, plant, and equipment, d) intangible assets, and e) current liabilities.
3. Write research papers on accounting issues using the Financial Accounting Standards Board (FASB) Codification.
4. Complete a spreadsheet project.

ACCT 382 Intermediate Accounting II

Accounting theory and literature as applied to long-term liabilities, stockholders' equity, statement of cash flows, and specialized topics. Completion of this course with a grade of "C" or better fulfills UDWR for accounting program.
Prereq.: ACCT 381 3 Cr. Fall | Spring

Student Learning Outcomes

1. Measure amounts for transactions, record transactions, and describe disclosure under Generally Accepted Accounting Principles (GAAP) for the following financial statement topics: a) notes and bonds payable, b) stockholders' equity, c) convertible securities, d) investments, e) income taxes, f) pensions and g) leases.
2. Measure amounts for transactions, record transactions, and describe disclosure under GAAP for revenue recognition at the point of sale, before delivery, and after delivery.
3. Compute basic and diluted earnings per share for a simple and complex capital structure.
4. Identify and differentiate sources of information for preparing and prepare a detailed Statement of Cash Flows.
5. Write papers or letters on accounting or other professional topics.

ACCT 383 Accounting Information Systems I

Accounting transactions, microcomputer skills for the accounting environment, and the fundamentals of accounting information systems and controls.
Prereq.: C or better in ACCT 381 3 Cr. Fall | Spring

ACCT 390 Cost Accounting

Cost accounting systems, development of internal accounting data, and use of this information to assist internal decision making.
Prereq.: ACCT 291, ACCT 292, IS 242 3 Cr. Fall | Spring

ACCT 404 Internal Audit 2
Governance and security issues related to information technology.
Prereq.: ACCT 304 3 Cr. DEMAND

Student Learning Outcomes
1. Evaluate the role internal auditors play in assessment and review of information controls and how these controls fit into the governance process within an organization.
2. Describe how information technology controls relate to internal audit standards and guidelines and how this process is viewed by regulatory bodies.
3. Recognize which information technology processes with organizations are prone to control issues and how this will affect the internal auditor's allocation of resources.
4. Identify the roles and responsibilities for various groups within an organization regarding internal controls over information technology.
5. Interpret the relationship between technology and the corporate governance profile of the organization.
6. Analyze fraud risks and controls as they relate to information technology.

ACCT 405 Fraud and Forensic Accounting
Principles of detecting fradulent financial reporting and occupational fraud.
Prereq.: ACCT 292 3 Cr. DEMAND

Student Learning Outcomes
1. Judge abuses of the flexibility inherent in accounting rules in financial reports.
2. Evaluate fraud investigation techniques, how and why occupational fraud is committed, and how fraudulent conduct can be deterred.
3. Practice fraud investigation techniques through projects requiring them to conduct a fraud investigation.
4. Employ professional writing and business skills through class activities and assignments.
5. Show their ability to work effectively in groups through a group project.

ACCT 444 Internship
Participation in a paid full-time position with a cooperating business, governmental, or civic organization whose program has been approved in advance by the department in which the student has an approved major. Credits provided upon completion of all requirements. A maximum of 3 credits may apply as electives in the major program. Permission of department.
Coreq.: 3-12 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Apply professional work skills during a full-time work experience.
2. Model work traits appropriate to the accounting profession, adhere to confidentiality and ethical policies and procedures of the employer, and integrate critical thinking skills as necessary into the work experience.
3. Prepare a written report about the work experience following approved guidelines.
4. Give a verbal presentation describing work experience to other students in the major.

ACCT 450 Personal Taxation
Federal income taxation of individuals including gifts, estates, and trusts.
Prereq.: ACCT 292 3 Cr. Fall

ACCT 451 Business Taxation
Federal income taxation of business organizations including corporations and partnerships. Property transactions and other business topics.
Prereq.: ACCT 292, ACCT 450 3 Cr. Fall | Spring

ACCT 470 Securities and Exchange Commission Accounting and Reporting
Corporate governance, SEC rules and issues regarding financial reporting and investor communication.
Prereq.: ACCT 292 3 Cr. DEMAND

Student Learning Outcomes
1. Identify obligations public companies have with regard to SEC rules, corporate governance, and investor communication.
2. Evaluate responsibilities of various groups within corporations necessary to comply with financial reporting and investor communication requirements.
3. Perform financial research and show professional business writing skills.

ACCT 481 Advanced Accounting
Accounting for business combinations, consolidated financial statements, and partnerships.
Prereq.: C or better in ACCT 382 3 Cr. Fall | Spring

Student Learning Outcomes
1. Prepare consolidated financial statements in conformity with GAAP and explain and interpret the

following complicating factors: a. partial ownership of investee companies, b. valuation differentials, and c. intercompany inventory, plant asset, and bond transactions.
2. Compute basic and diluted earnings per share for a consolidated entity.
3. Allocate income for complex ownership structures involving indirect and mutual stock holdings.
4. Analyze and record partnership transactions for: a. formation of partnership, b. subsequent operation of the partnership, c. changes in ownership interests, and d. partnership liquidation.
5. Prepare partnership financial statements and associated allocations for partnerships.

ACCT 484 Governmental and Not-For-Profit Accounting

Fund accounting as applied to governmental and not-for-profit entities.
3 Cr. Fall

Student Learning Outcomes

1. Identify and interpret fundamentals of fund accounting principles and practices.
2. Apply the critical elements that make up governmental accounting and reporting.
3. Assess the nuances involved in accounting and reporting for state and local governmental entities (SLGs) and various types of not-for-profit organizations (NPOs).
4. Apply appropriate use of fund accounting for SLGs and NPOs.

ACCT 485 Corporate Governance

Develop an understanding of corporate organizations and responsibilities of parties within the corporation. Gain an understanding of Sarbanes Oxley. Develop an understanding of corporate topics and research necessary to communicate and coordinate financial reporting.
Prereq.: ACCT 292 plus 90 credits completed 3 Cr. DEMAND

Student Learning Outcomes

1. Describe corporate organizations and recall the relevant responsibilities of various parties within the corporation for overall corporate governance, financial reporting and communication to investors.
2. Distinguish the various aspects of Sarbanes Oxley that are relevant to the operation of the board of directors and audit committee, financial reporting and investor communication.
3. Identify the relevance of corporate topics reported in the financial press and perform the research necessary to relate the issues to corporate governance and financial reporting.
4. Identify the communication and coordination necessary within the corporate framework to produce timely and accurate financial reporting to investors.

ACCT 486 Financial Auditing

Nature of the audit function, nature of audit evidence, audit standards and procedures, professional ethics, and audit reports.
Prereq.: C or better in ACCT 382 3 Cr. Fall | Spring

Student Learning Outcomes

1. Examine assurance, attestation, and auditing fundamentals used by accounting professionals.
2. Apply U.S. Generally Accepted Auditing Standards and procedures to auditing, assurance, and attestation engagements. a. assess risk inherent in financial statement assertions b. analyze financial and non-financial data c. evaluate internal controls, incorporating the management responsibilities required by the Sarbanes Oxley Act and Auditing Standard No. 5 d. design audit programs for financial statement audits e. identify conditions that lead to fraud 3. Explain and apply the AICPA (American Institute of CPAs) Code of Professional Conduct and the PCAOB (Public Company Accounting Oversight Board) Ethics & Independence standards.
4. Apply an ethics framework to identify and examine alternatives and resolve ethical dilemmas.

ACCT 487 Operational Auditing

Nature of internal and operational auditing, performance of an operational audit.
Prereq.: FIRE 371, MGMT 301, MGMT 383, MKTG 320 or permission of instructor. 3 Cr. DEMAND

Student Learning Outcomes

1. Describe the role internal auditors play in industry, government, and private organizations and how they fit into the governance process within these organizations.
2. Examine and describe internal audit standards, guidelines and emerging issues in such areas as Committee on Sponsoring Organizations of the Treadway Commission (COSO), Public Company Accounting Oversight Board (PCAOB), Sarbanes Oxley Act, and other relevant laws and regulations.
3. Recognize which processes within organizations are prone to control issues and the roles and the responsibilities for various groups within an

organization and use this information to evaluate how this will affect the internal auditor's allocation of resources.
4. Evaluate how technology fits into the control environment.
5. Examine fraud risks and controls.
6. Explain and evaluate the internal audit process and how the assurance and consulting engagements are conducted under the Institute of Internal Audit Standards.

ACCT 490 Current Topics in Accounting

Current developments, trends and issues in accounting. May be repeated with different topics to a maximum of 9 credits.
Prereq.: permission of department Coreq.: 1-3 Cr. DEMAND

ACCT 493 International Accounting

Accounting theory and practice, taxation, and special reporting problems of several major industrial countries. Multinational corporate accounting problems.
3 Cr. DEMAND

Student Learning Outcomes

1. Identify and describe the global accounting environment.
2. Examine the major accounting issues faced by companies engaged in international business and explain the differing roles of accounting worldwide.
3. Describe the culture and institutional differences that affect accounting practices in different countries.
4. Examine International Financial Reporting Standards (IFRS) and distinguish the recognition, measurement, and disclosure differences between IFRS and U.S. Generally Accepted Accounting Principles (GAAP).
5. Evaluate the arguments for and against a global set of accounting standards.
6. Further develop research, critical thinking, problem-solving, analytical, communication, presentation, spreadsheet, or collaboration skills.

ACCT 498 Business Consulting

Teams of students work as consultants to area businesses and non-profit organizations to diagnose and solve actual business problems. Written and oral report required.
Prereq.: ACCT 292, IS 242 or STAT 242, FIRE 371, MGMT 201, MKTG 220, or permission of department. 3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the practice of business consulting.
2. Work on a local business project in the role of a consultant as an individual or as a team.
3. Write and present a professional report on the project.

African Studies (AFST)

AFST 250 Introduction to African Studies (Diversity)

Geography, history, politics, society, ecology, economics, culture, foreign policy and contemporary issues.
3 Cr. Fall GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

AFST 370 Contemporary Issues in Sub-Saharan Africa

Social, economic, political, environmental and international issues facing one or more sub-Saharan African country.
Prereq.: AFST 250 or junior status or consent of instructo 3 Cr. Spring

AFST 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Anthropology (ANTH)

ANTH 101 Introduction to Anthropology (Diversity)

What it means to be human. Human nature through time and around the world; human evolution, culture, kinship, religion, politics, economics, and language.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

ANTH 130 Introduction to Prehistoric Cultures (Diversity)

The origins and development of human cultural systems from the earliest stone ages through prehistoric complex civilizations with many archaeological case studies from around the world.

3 Cr. Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ANTH 140 Human Origins (Diversity)

Summary, based on the last 7 million years of fossil evidence, of the major biological events leading to the development of modern human beings.
3 Cr. Fall GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

ANTH 188 Indians of the Americas (Diversity)

Origins, distribution and development of the human cultures found in North, Central and South America. Impact of European contact on the indigenous people of the Americas.
3 Cr. Fall GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ANTH 198 The Anthropology of Modern American Life

Is there a distinctive culture in the United States? Popular culture, public spectacle, sport, work, and education in the United States today.
3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ANTH 201 Anthropology of Popular Fiction

Content analysis of popular fiction in cultural terms. Cultural analysis and special topics of popular novels and films.
3 Cr. DEMAND

ANTH 230 Introductory Archaeology

The scientific study, based on material remains, of the human past; research activities, including problem orientation, site location, excavation, analysis and interpretation.
3 Cr. Spring

Student Learning Outcomes

1. Critically analyze the anthropological concept of culture, especially as used by archaeologists.
2. Evaluate anthropological approaches to the human past, including theory, field methods, and data analysis and interpretation.
3. Demonstrate the ability to read, think, and evaluate qualitative data from a critical perspective.
4. Demonstrate writing skills that involve communicating ideas clearly, synthesizing information, and analyzing and applying anthropological concepts.

ANTH 240 Introductory Bioanthropology

Physical anthropology; variations, adaptations, and adjustments of the human species.
3 Cr. Fall

Student Learning Outcomes

1. Describe contemporary evolutionary theory, including genetic variability, heredity, and natural selection in the microevolution of populations.
2. Summarize contemporary evolutionary theory, including evolutionary processes leading to macroevolutionary change (speciation).
3. Use contemporary evolutionary theory to trace major patterns of variation and adaptation in modern human populations.
4. Evaluate contemporary evolutionary theory, including the place of the human species within a broader context of primate biology and evolution, and an appreciation of how studies of our closest relatives shed light of human behavior and adaptation.
5. Apply contemporary evolutionary theory to investigations of primate biological change, including the evolutionary history of our subfamily Homininae, involving both knowledge of the fossil evidence for human evolution and the influence of cultural innovation on human evolutionary patterns.
6. Identify the interaction between culture and evolution in human evolutionary history, including what it means to say that human beings are biocultural organisms.
7. Demonstrate a knowledge of, and respect for, human cultural diversity worldwide and through time.

ANTH 250 Introductory Cultural Anthropology (Diversity)

Culture in the human experience, how anthropologists study it, and how it changes. Study of its dimensions in societies around the world.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

Student Learning Outcomes

1. "Explicate the anthropological concept of culture, specifying how evidence for human cultural learning demonstrates the lack of evidence for the existence of biological ""races""." 2. Summarize how cultural anthropologists use participant-observation to learn about the ways of life of living people, and how these change over time and across space.
3. Articulate the importance for cultural anthropologists of symbolic processes in all human

activities.
4. Demonstrate the ability to read, think, and evaluate qualitative data from a critical perspective.
5. Demonstrate writing skills that involve communicating ideas clearly, synthesizing information, and analyzing and applying anthropological concepts.
6. Demonstrate knowledge of, and respect for, human cultural diversity worldwide and through time.

ANTH 252 Human Ecology

An anthropological study of the interrelationship between human groups and their biological environments. Critical analysis of rapid population growth and urbanization in the context of scarce resources.
3 Cr. Spring GOAL AREA 10: ENVIRONMENTAL ISSUES

ANTH 260 Introduction to Linguistic Anthropology

Anthropological study of language use in social, cultural, and political contexts. Ethnolinguistic case studies from around the world.
3 Cr. Spring

Student Learning Outcomes
1. Identify the role linguistic anthropology plays in the context of the other anthropological subfields.
2. Summarize major changes over time in anthropological approaches to the relationship between language and culture.
3. Demonstrate a basic grasp of the techniques used by linguists and linguistic anthropologists to analyze sounds, words, sentences, and modes of discourse in different linguistic systems.
4. Articulate central issues involved in debates about linguistic determinism and the agency of individual speakers.
5. Explicate ethnographic findings in key areas of contemporary research in linguistic anthropology.

ANTH 275 Introduction to Museology

The operation and functions of anthropology museums for education, research, and preservation; practicum in various aspects of museum work including preparation of exhibits, cataloging, conservation.
Prereq.: ANTH 250 or consent of instructor 3 Cr. DEMAND

ANTH 301 Anthropology and the Arts

The arts - which may include consideration of music, drama, dance, plastic, and graphic arts - considered anthropologically. The relation of the arts to other aspects of culture; the arts as communication; the arts as molders of culture
3 Cr. Odd Fall

Student Learning Outcomes
1. Distinguish among different anthropological approaches to the arts.
2. Analyze the concept of authenticity as it pertains to the arts of the non-Western world.
3. Define the anthropological concept of culture and show how anthropologists use this concept to account for similarities and differences in the art forms of human societies.
4. Present the results of their research into a specific art form in a specific society.
5. Compare and assess the ways members of different societies assign cultural significance to specific art forms in relation to such distinctions as nationality, ethnicity, race, class, and gender.

ANTH 310 Society and Culture in Latin America

Aspects of society and culture in modern Latin America. Equal emphasis will be placed on exploring distinctive features of Latin American social and cultural patterns and examples drawn from a variety of Latin American societies.
3 Cr. Odd Spring

Student Learning Outcomes
1. Explain the details of the argument over whether such an entity as 'Latin America' exists.
2. Define the anthropological concept of culture and show how anthropologists use this concept to account for similarities and differences among Latin American societies.
3. Describe and analyze the history and current situation of one specific Latin American country.
4. Compare and assess the structural forces that affect society and culture in Latin America.

ANTH 311 Peoples and Cultures of Asia

Survey and analysis of cultural diversity and unity on the continent of Asia.
Prereq.: ANTH 250 3 Cr. DEMAND

ANTH 312 Society and Culture in Africa

Society and culture in modern Africa, with attention to diversity of cultures and contemporary social and cultural processes.
Prereq.: ANTH 250 3 Cr. DEMAND

Student Learning Outcomes

1. Define the anthropological concept of culture and show how anthropologists use this concept to account ethnographically for a varied range of cultural practices in societies of contemporary Africa.
2. Analyze and compare the ways in which particular cultural practices are entangled with particular symbolic and practical arrangements in particular communities in different parts of Africa.
3. Analyze and assess the consequences of colonialism, postcolonialism, and globalization (e.g., the effects of urbanization, migration, and the spread of feminist, human rights, and other discourses and practices) on contemporary African communities.
4. Produce written texts showing how anthropological concepts can be used to assess a range of explanations for stability and change in cultural practices in contemporary Africa.

ANTH 313 Hmong Culture and Society

Hmong history and sociocultural issues from a comparative perspectives of the Hmong communities in Asia and the diaspora communities in the Western world, their migration patterns, contemporary issues, and transnational movements.
3 Cr. DEMAND

Student Learning Outcomes

1. Examine the varieties of multidisciplinary approaches and theories which have been applied in Hmong Studies, as well as of the principal findings that have been generated in consequence.
2. Synthesize the issues faced by the Hmong of America and in the other nations in which they have settled.
3. Demonstrate knowledge of Hmong history, culture, and society.
4. Demonstrate appreciation for the contributions made by the Hmong both in American and other world societies.

ANTH 315 Topics in Asian Homelands and/or Diaspora Communities

Historical, economic, sociocultural, and political impacts of various transnational movements on specific Asian nations and their peoples. May be repeated with different nations to max. of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate knowledge of international affairs and expanded appreciation for alternative worldviews.
2. Evaluate race, ethnicity, class, and gender from a transnational perspective.
3. Examine Asian ethnicity in Asian homelands, most especially with respect to the Asian American communities of the United States.
4. Analyze the historical, economic, sociocultural, and political impacts of colonialism and Westernization in Asia.
5. Demonstrate enhanced knowledge of personal heritage acquired through visits to ancestral homelands for Asian American students.

ANTH 332 Sickness and Health in Prehistory

Sickness and health from earliest prehistory to modern times, from the perspective of anthropological archaeology. Includes medicinal and health practices, the ethics of studying human remains, and applications to present-day concerns.
Prereq.: ANTH 230 or ANTH 240 3 Cr. Odd Fall

Student Learning Outcomes

1. Identify methods of archaeology and human osteology that are used to examine patterns of health and sickness in different kinds of societies throughout prehistory.
2. Distinguish changes in health associated with the emergence of agriculture, the development of cities and states and other major changes in human prehistory.
3. Specify past medicine and health practices in different parts of the world through time.
4. Explain how the study of sickness and health in past societies is relevant to present-day issues.
5. Produce written texts showing how anthropological concepts can be used to assess a range of explanations for sickness and health in prehistory.

ANTH 346 Race and Human Variation

Human biological variation, its meaning, function, and significance for human adaptation and the race concept.
3 Cr. Even Fall

Student Learning Outcomes

1. Describe contemporary evolutionary theory, including: genetic variability, heredity, and natural selection in the evolution of populations; major patterns of variation and adaption in modern human

populations; the place of the human species within a broader context of primate biology and evolution and an appreciation of how studies of our closest relatives shed light on human behavior and adaption; and, what it means to say that humans are biocultural organisms.
2. Analyze qualitative and quantitative data.
3. Develop writing skills that include the ability to communicate ideas clearly, synthesize information, and analyze and apply anthropological concepts.
4. Critically evaluate the race concept as portrayed in the popular media.

ANTH 347 Case Studies in Forensic Anthropology

Investigation of theory and method in forensic anthropology through critical analysis of forensic cases.
3 Cr. DEMAND

ANTH 350 The Ethnographic Enterprise

Anthropological writing and recent directions in interpretation through reading of classic and contemporary works on different societies.
Prereq.: ANTH 250 3 Cr. Fall

Student Learning Outcomes

1. Describe the structure of the ethnographic genre.
2. Increase proficiency in writing for general educated audiences.
3. Compare and contrast ethnographic writing at the monograph level.
4. Explain and evaluate current directions in the anthropological representation of the 'Other'.

ANTH 351 Food, Society, and Culture

The production, provision, and consumption of food which occupies human beings everywhere. The social and cultural significance of food, including the logic of food systems, food and reproduction, food and gender, food and power, and how food creates and symbolizes collective life.
Prereq.: ANTH 250 3 Cr. Odd Fall

Student Learning Outcomes

1. Explain how anthropologists study, classify, and describe variation in human strategies for the production, distribution, and consumption of food over time and across space.
2. Define the anthropological concept of culture and show how anthropologists use this concept to account for similarities and differences in food practices in human societies.
3. Compare and assess the ways members of different societies assign cultural significance to foods and food practices in relation to such social and culture distinctions as nationality, ethnicity, race, class, gender, or sexuality.
4. Analyze and evaluate the role of global economic and political processes that challenge indigenous food practices around the world.
5. Produce written texts showing how anthropological concepts can be used to evaluate qualitative information about human food practices.

ANTH 361 A Global World

Effects of the modern world on tribal and peasant peoples. Colonialism, neocolonialism, sacred and secular missionary activity, industrialization, multinationals, tourism. The responses of native peoples.
Prereq.: ANTH 101 or ANTH 250 or permission 3 Cr. Spring

Student Learning Outcomes

1. Explain how anthropologists have traditionally studied, classified, and described variation in forms of human society across time and space, using the anthropological concept of culture.
2. Identify key historical turning points in global history that have drawn indigenous people around the world into increasingly intense connections with Western European societies since the end of the 15th century, and describe how anthropologists trace the effect of these connections on indigenous peoples.
3. Use anthropological concepts to analyze and evaluate accounts of the effects of globalization on particular local communities.
4. Show how ethnographic analysis can be used to reveal the active responses of members of different communities to the effects of global processes.
5. Produce written texts showing how anthropological concepts can be used to evaluate qualitative information about the effects of global processes on particular human communities.

ANTH 364 Sex and Gender

The social and cultural construction of sex and gender cross-culturally. Examples from selected societies.
Prereq.: ANTH 101 or ANTH 250 3 Cr. DEMAND

Student Learning Outcomes

1. "Explain how anthropologists study, classify, and describe biological variation in the human species, and why they reject attempts to reduce social or

gender inequalities to ""racial"" or ""sexual"" differences rooted in biology or genetics." 2. Define the anthropological concept of culture and show how anthropologists use this concept to account ethnographically for a varied range of practices associated with gender and sexuality across human societies.
3. Compare and assess the ways in which different constructions of gender and sexuality are connected to different symbolic and practical arrangements in different societies.
4. Analyze and evaluate the consequences of globalization, especially the development and spread of feminist and human rights discourses and practices, on sex and gender practices in particular communities.
5. Produce written texts showing how anthropological concepts can be used to evaluate biological and cultural explanations of varied cultural practices surrounding sex and gender.

ANTH 369 Myth, Magic and Religion

A cross-cultural investigation of religion. Anthropological approaches to origins and functions of religion, myth, ritual, magic and witchcraft, dynamics of religion.
Prereq.: ANTH 101 or ANTH 250 or permission 3 Cr. Odd Spring

Student Learning Outcomes

1. "Explain the problematic associated with the definition of ""religion"". " 2. Describe human religious diversity.
3. Increase proficiency in writing for general educated audiences.
4. Effectively use the key terms of the anthropological study of religion.
5. Carry out ethical and sensitive ethnographic field research on religion.

ANTH 370 Applied Anthropology

Applications of anthropology to problems of social change. Emphasis on ethical problems inherent in social engineering.
Prereq.: ANTH 250 3 Cr. Even Spring

Student Learning Outcomes

1. Demonstrate an understanding of applied anthropology and its place within the larger discipline of anthropology.
2. Explore different anthropological approaches to the study of social organization and multi-sited fieldwork.
3. Evaluate collaborative applied approaches in anthropology.
4. Analyze and assess policy issues related to applied approaches.
5. Articulate needs of a community via applied methodology.

ANTH 371 Urban Anthropology

An introduction to use of anthropological theory and methods in the urban milieu.
Prereq.: ANTH 250 3 Cr. Even Fall

Student Learning Outcomes

1. Evaluate urban anthropology and its place within the larger anthropological subfield of cultural anthropology.
2. Explore different approaches and assess applied approaches to the study of urban issues and multi-sited fieldwork.
3. Examine the urban space and analyze policy issues related specifically to the urban environment.
4. Articulate urban needs of a community and formulate processes to access these needs.

ANTH 372 Business and World Culture

Role of culture in influencing business practices and cross-cultural business interaction. Culture theory and its application to the business world. The impact of international business on cultural process and national development.
Prereq.: ANTH 250 3 Cr. DEMAND

Student Learning Outcomes

1. Compare and assess the ways members of different societies assign cultural significance to specific business practices in relation to such distinctions as nationality, ethnicity, race, class, and gender.
2. Define the anthropological concept of culture and apply it to business.
3. Explain the ways that international business practices affect the societies and cultures with which they come into contact.
4. Prepare an anthropological case study that analyzes the practices of a specific international business.
5. Apply culture theory to the business world.

ANTH 375 Medical Anthropology

Health, disease, illness, and sickness from a holistic anthropological perspective, emphasizing both uniformity and variation in human health as influenced by cultural, biological, linguistic, and

historical variables.
3 Cr. Odd Spring

Student Learning Outcomes
1. Acquire an awareness of the basic concepts of health, healing, illness, and disease in the context of a variety of world cultures.
2. Acquire an understanding of the social forces and institutions affecting health, healing, illness, and disease in diverse societies.
3. Acquire a knowledge of the historical development of Medical Anthropology, its theoretical approaches, and its methodological applications.
4. Acquire an appreciation for the diverse cultural and biological influences on health, healing and illness.
5. Acquire a capacity to consider in an informed manner the social policies, trends, laws, regulations, and issues affecting disease, treatment and human health.
6. Acquire an ability to assess diverse healthcare systems and alternative healthcare practices.

ANTH 390 Topics in Archaeology

Selected topics--either regional (e.g. European, North American, Mesoamerican), temporal (e.g. historic, prehistoric, classical), or topical (e.g. experimental, cognitive, environmental) in contemporary anthropological archaeology. Different topics may be repeated for a maximum of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Examine a selected topic in contemporary anthropological archaeology.
2. Read primary and secondary texts concerning the selected topic, at a level appropriate to advanced undergraduate education.
3. Discuss a variety of anthropological perspectives on the selected topic.

ANTH 391 Topics in Sociocultural Anthropology

Topics in subdisciplines of sociocultural anthropology. Different topics may be repeated for a maximum of 9 credits.
Prereq.: ANTH 250 3 Cr. DEMAND

Student Learning Outcomes
1. Define the anthropological concept of culture and show how anthropologists use this concept to account ethnographically for a varied range of practices associated with the particular topic that is the focus of this version of ANTH 391.
2. Compare and assess the ways in which similarities and differences in the cultural practices associated with this topic are entangled with different symbolic and practical arrangements in different societies.
3. Analyze and evaluate the consequences of contemporary social, economic, and political processes on the cultural practices associated with this topic, using ethnographic materials collected in different human communities.
4. Produce written texts showing how anthropological concepts can be used to evaluate different explanations of the cultural practices associated with the topic of this course.

ANTH 392 Topics in Biological Anthropology

Selected topics in contemporary biological anthropology. May be repeated under different topics for a maximum of 9 credits.
Prereq.: ANTH 240 3 Cr. DEMAND

Student Learning Outcomes
1. Delineate the modes of evolution embodied in contemporary evolutionary theory, including sources of genetic variability, gene flow, genetic drift, and natural selection.
2. Analyze the influence of evolutionary processes on the microevolution of human and non-human primate populations.
3. Contextualize the place of the human species within a broader framework of primate biology and evolution and explain how studies of our closest relatives shed light on human behavior and adaptation.
4. Examine the human fossil record for the human subfamily Homininae and evaluate the interaction between culture and biology in shaping human evolution.
5. Produce written texts showing how anthropological concepts can be used to evaluate different hypotheses of human biology and evolution associated with the topic of this course.

ANTH 400 Special Problems

A seminar or conference course for advanced students wishing to work out a special problem in the academic area.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Identify a special problem in Anthropology.
2. Assess resources available for solving the special

problem at hand.
3. Read and discuss resources related to the special problem at hand.

ANTH 430 Research Methods in Archaeology

Basic categories of archaeological methodology; general research, field, analytical, and quantitative methods.
Prereq.: ANTH 230, ANTH 390 and/or permission 3 Cr. Even Summer

Student Learning Outcomes

1. Differentiate between different research methods available to archaeologists, with a focus on field methods.
2. Determine the most appropriate research methods to use in a variety of archaeological field situations.
3. Produce written texts showing an understanding of the research design and methods used at an archaeological site.

ANTH 431 Laboratory Methods in Archaeology

Laboratory processing, classification and analysis of archaeological materials. Laboratory methods for the artifacts and ecofacts commonly recovered from archaeological contexts.
3 Cr. Spring

Student Learning Outcomes

1. Discuss the major debates about archaeological classification and typology.
2. Demonstrate use of catalog and curation procedures for the most common kinds of archaeological remains.
3. Identify common archaeological artifacts.
4. Employ the appropriate procedures for processing, sorting and analyzing the most commonly recovered types of archaeological artifacts.
5. Explain how laboratory analysis complements fieldwork.
6. Analyze basic archaeological data and present results of this analysis.

ANTH 432 North American Archaeology

Native American settlement and life in North America north of Mexico from 15,000+ years ago to the recent past, based on archaeological study. Examination of major debates and ethical issues in the excavation, analysis and interpretation of North American archaeological sites.
3 Cr. Spring

ANTH 433 Archaeology of the Upper Midwest

Environmental and geological setting, history of archaeology in the region, tribal archaeology and historic preservation, and legal aspects of archaeology in the upper Midwest as well as a chronological overview of regional prehistory.
3 Cr. Spring

Student Learning Outcomes

1. Identify specific cultural traits used to define the archaeological history of human occupation in the Upper Midwest and adjacent regions.
2. Explain the relationship between climate change and long-term cultural adaptation throughout the Upper Midwest since the end of the last Ice Age.
3. Apply an anthropological concept of culture to examine the importance of symbolism in human activities such as language, the arts, the afterlife, and other creative human endeavors.
4. Critically evaluate different lines of evidence and types of data to assess the validity of knowledge claims about past cultures.
5. Integrate different lines of evidence to develop synthetic explanations about past human cultures of the Upper Midwest.

ANTH 435 Field Methods in Archaeology

Field research in archaeology.
Prereq.: ANTH 101 or ANTH 250 or SOC 160 or instr consent 6 Cr. Even Summer

Student Learning Outcomes

1. Apply appropriate archaeological excavation techniques in a variety of field situations.
2. Produce written texts showing an interpretation of the archaeological site based on ongoing fieldwork.
3. Use professional actions and behavior in all aspects of archaeological fieldwork.

ANTH 438 Cultural Resource Management and Applied Archaeology

Management of ethnic, historic, and prehistoric cultural resources; emphasis on site location and identification, determination of level(s) of significance, impact assessment, and mitigation procedures.
Prereq.: ANTH 230 or permission of instructor 3 Cr. DEMAND

Student Learning Outcomes

1. Trace the development of historical preservation laws in the United States.

2. Name current federal and state legislation that guides the study, protection and management of archaeological sites and other cultural resources.
3. Appraise ethical issues in cultural resource management.
4. Examine issues related to working with diverse interest groups and descendant communities.
5. Evaluate career options in cultural resource management.

ANTH 442 Primate Biology and Evolution

Evolutionary history of non-human primates, their origins and the emergence of major primate groups.
Prereq.: ANTH 240 or consent of instructor 3 Cr.
DEMAND

Student Learning Outcomes

1. Describe contemporary evolutionary theory, including: genetic variability, heredity, and natural selection in the evolution of populations; evolutionary processes leading to macroevolutionary change (speciation) within primates; the place of the human species within a broader context of primate biology and evolution and an appreciation of how studies of our closest relatives shed light on human behavior and adaption.
2. Identify the major radiations of living and extinct primates, and evidence for their continuity through time and space.
3. Utilize methods for reconstructing relationships between primate groups.
4. Evaluate the primate skeleton, and how skeletal structures provide evidence of behavior, adaption, and evolutionary relationships.

ANTH 443 Primate Behavior and Ecology

Behavior of living primates and their interaction with environment.
Prereq.: ANTH 240 or consent of instructor 3 Cr.
DEMAND

Student Learning Outcomes

1. Describe contemporary evolutionary theory, including: the place of the human species within a broader context of primate biology and evolution and an appreciation of how studies of our closest relatives shed light on human behavior and adaption; and, genetic variability, heredity, and natural selection in the microevolution of populations.
2. Practice research methods used in primatology.
3. Read, think, and evaluate information critically.
4. Communicate ideas clearly (in writing).
5. Synthesize information.

ANTH 444 Internship

A maximum of 6 credits may be used toward a major; 3 credits used toward a minor; remainder will be used in general electives.
Coreq.: 1-9 Cr. DEMAND

Student Learning Outcomes

1. Design, with guidance from an instructor, an internship plan that provides hands-on learning in anthropology.
2. Organize time and manage assigned tasks as professional anthropologists do.
3. Produce written texts showing growth in anthropological skills.
4. Complete reflexive analysis.

ANTH 447 Essentials of Forensic Anthropology

Techniques for the location, recovery and laboratory analysis of human skeletal remains including sex, age, population affinity, stature, pathology and trauma.
3 Cr. Odd Spring

Student Learning Outcomes

1. Understand and know methods in forensic archaeology including the location and recovery of buried evidence, crime scene processing, and rules for handling forensic evidence.
2. Understand criteria for evaluating the forensic relevance of discovered remains.
3. Understand skeletal biology including the structure, composition, evolution, and function of the bones of the human skeleton.
4. Understand and know the bones of the human skeleton and those features relevant to bone identification and questions of personal identity and life history.
5. Understand and know how to identify human from non-human bones.
6. Understand and know methods of estimating age, sex, population affinity, stature, pathology, and trauma from human skeletal remains.

ANTH 450 Ethnographic Research Methods

Practice and theory of ethnographic research. Research design, participant observation, interviewing, questionnaires, field note taking and management, data analysis, ethics. Hand on exercises.

Prereq.: ANTH 250, 3 additional credits or permission 3 Cr. Odd Summer

Student Learning Outcomes
1. Prepare a research proposal for 5 weeks of ethnographic field work.
2. Explain the details of the ethics of ethnographic research.
3. Describe and evaluate the techniques of contemporary ethnographic research+participant observation, interviewing, and surveys.
4. Successfully complete structured exercises in ethnography.

ANTH 455 Field Research in Ethnography

Field research in social and cultural anthropology.
Prereq.: ANTH 101, ANTH 250, SOC 160 or instructor consent 6 Cr. Odd Summer

Student Learning Outcomes
1. Successfully complete ethnographic research project based on proposal developed in ANTH 450.
2. Document ethical practice appropriate to student's project.
3. Prepare adequate field notes according to professional standards as laid out in ANTH 450.
4. Produce an essay that critically reflects on the experience of carrying out field research.

ANTH 463 Seminar

Discussion and readings in advanced topics in anthropology. A specific topic selected each time offered. May be repeated to maximum of 6 credits.
Prereq.: ANTH 101 or permission of instructor 3 Cr. DEMAND

Student Learning Outcomes
1. Read advanced anthropological texts in a specific topic.
2. Discuss anthropological knowledge in a specific topic.

ANTH 470 Anthropological Analysis and Interpretation

A survey of anthropological methods and techniques of analysis and interpretation applied to data obtained from prior field work.
Prereq.: ANTH 435 or ANTH 455 or permission 3 Cr. Fall

Student Learning Outcomes
1. Identify and evaluate a range of anthropological theories, methods and techniques of data analysis, and select those that are appropriate for analysis and interpretation of the kind of anthropological data collected during the student's field project.
2. Apply appropriate methods of analysis and interpretation to the data collected during the student's field project, according to standards suitable for the subfield of anthropology within which the research was conducted.
3. Produce a written text that displays how anthropologists in this subfield describe, analyze, and interpret research findings for a professional audience.

ANTH 471 Cognitive Anthropology

Personality development in context of cultural patterns for behavior in both preliterate and modern societies.
Prereq.: ANTH 250 3 Cr. Fall | Spring | Summer

ANTH 472 Topics/Fieldwork in Asian Homelands or Diaspora Communities

Travel and field experience in Asian Homelands or Diaspora Communities. May be repeated with different nations to maximum of 9 credits.
Prereq.: ETHS 315 or ANTH 315 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate knowledge of international affairs and expanded appreciation for alternative worldviews.
2. Evaluate race, ethnicity, class, and gender from a transnational perspective.
3. Examine Asian ethnicity in Asian homelands, most especially with respect to the Asian American communities of the United States.
4. Analyze the historical, economic, sociocultural, and political impacts of colonialism and Westernization in Asia.
5. Demonstrate enhanced knowledge of personal heritage acquired through visits to ancestral homelands for Asian American students.

ANTH 474 Culture and Family

Family structure and dynamics in non-Western countries. Cultural variations, historical and contemporary family patterns, relationship of family to other institutions, comparisons of non-Western and Western families.
Prereq.: ANTH 250 or SOC 160 or consent of instructor 3 Cr. DEMAND

ANTH 480 Theory and Practice in Anthropology

History of anthropological thought. Emphasis on basic problems and theoretical approaches in various subdisciplines of anthropology, relation of theory to practice.
Prereq.: ANTH 350 3 Cr. Spring

Student Learning Outcomes
1. Identify and describe the traditional four fields of North American anthropology, and explain similarities and differences between North American anthropology and other traditions of anthropology that developed in Europe and elsewhere, since the nineteenth century.
2. Describe the major turning points in anthropological theory since the nineteenth century, outline the critiques of particular theoretical perspectives at each point, and explain how subsequent theorists attempted to respond to these critiques 3. Describe the ways in which different kinds of assumptions (e.g., idealist versus materialist) have been incorporated in different anthropological theories, and explain what the consequences are when such theories are used to guide or to interpret anthropological research in different subfields of anthropology.
4. Produce written texts that demonstrate the ability to analyze and evaluate the claims of different anthropological theorists.

Art (ART)

ART 101 Foundation Drawing I: Observation
Basic drawing skills, materials and techniques with emphasis on perceptual acuity and visual elements.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate facility in the fundamentals of drawing, including line quality and variety, gesture, shape, volume, value, light, texture, perspective, and composition.
2. Use various materials, approaches and drawing techniques.
3. Draw from observation.
4. Develop and use technical skills, visual vocabulary and critical thinking associated with various drawing concepts, techniques, and media.

ART 102 2-D Design and Color
Critical and analytical skills used in building basic visual design vocabulary.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply basic principles and processes of two-dimensional design.
2. Apply color theory through exercises and projects.
3. Use technical and professional vocabulary for describing, analyzing, and interpreting visual arts.
4. Demonstrate craftsmanship and problem solving skills in creating projects.

ART 103 Foundation Drawing II: Form and Content
Perceptual and conceptual drawing problems, theme and content development, media experimentation, and critical vocabulary.
Prereq.: ART 101 3 Cr. Fall | Spring

Student Learning Outcomes
1. Refine observational drawing skills.
2. Integrate critical thinking and conceptual drawing skills with fundamental technical skills.
3. Use color and mixed media in drawing assignments.
4. Develop and use a critical vocabulary to respond to their own work and the work of others.

ART 104 3-D Design
Design and manipulation of form and space through a diverse approach to materials and processes.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of three dimensional design through exercises and projects.
2. Demonstrate awareness of spatial problems and sensitivity to design while employing a range of materials.
3. Use technical and professional vocabulary for describing, analyzing, and interpreting visual arts.
4. Acquire and demonstrate an understanding of installation techniques specific to sculpture.
5. Develop and use problem solving skills in creating projects with an awareness of craftsmanship.

ART 105 Computer Studio
Computer as a creative tool. Exposure to various applications and media.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Use the computer as a creative tool for artistic problem-solving.
2. Apply a range of software applications for print

and screen.
3. Collaborate on and research projects.
4. Present and critique art projects.
5. Explore the range of possibilities in computer graphics available for the contemporary artist.
6. Implement basic design principles in developing digital art projects.

ART 130 Studio Art for Non-Majors

Studio experiences in various media. See class schedule for listing of topics. May be repeated with different topics to a maximum of 9 credits.
3 Cr. DEMAND GOAL AREA 6: HUMANITIES AND FINE ARTS

ART 131 Introduction to the Visual Arts of the World (Diversity)

Visual arts as a unique form of human communication of personal and cultural values.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

ART 198 Research and Analytical Writing in Art

Analytical reading and writing in context of visual arts. Integrates writing, visual communication, design, art-making, and art history. Extended research project. Meets Goal 1 writing requirement.
4 Cr. DEMAND GOAL AREA 1: COMMUNICATE ORALLY & IN WRITING

ART 201 Critical Frameworks

Criticism, theory, and practices of contemporary visual arts in studio setting.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze basic elements of modern, postmodern, and contemporary theories of art.
2. Analyze examples of art according to modern, postmodern, and contemporary theories.
3. Use theoretical elements in conceptualizing and creating art.
4. Develop and apply critical vocabulary for discussing their own work and the work of others.

ART 202 Combined Media

Traditional and contemporary approaches with currently used technologies.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze contemporary art that uses performance, installation, digital media, and/or combinations of media.
2. Create projects that combine, respond to, appropriate, or question media, materials, and/or approaches to art making.
3. Develop and apply critical vocabulary for discussing their own work and the work of others.

ART 220 Introduction to Graphic Design Studio I

Principles and practice of graphic design; study of visual signs and symbols including letterforms. Students must have successfully completed first year foundations (ART 101, ART 102, ART 103, ART 104, ART 105) or have departmental permission to enroll in ART 220.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. Fall | Spring

Student Learning Outcomes

1. Recognize and apply conceptual and metaphorical aspects of typography.
2. Utilize the principles of typographic hierarchy and demonstrate knowledge of typographic legibility and clarity.
3. Apply design skills in compositional relationship between type and image, typographic manipulation, conceptual thinking and creative problem solving.

ART 221 Introduction to Graphic Design Studio II: Tools and Techniques

Problem solving using current tools and techniques used in graphic design. Students must have successfully completed first year foundations (ART 101, ART 102, ART 103, ART 104, ART 105) or have departmental permission to enroll in ART 221.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. Fall | Spring

Student Learning Outcomes

1. Evaluate and employ typographic forms effectively.
2. Apply computer technology and software skills to solve visual communication problems.
3. Apply a design process to create project work.
4. Identify and appraise significant subjects in the field through written and oral presentations.

ART 230 Art History Survey I

Painting, sculpture and architecture from Paleolithic to the end of the thirteenth century. Stylistic classification of major works of art throughout the

world.
3 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

ART 231 Art History Survey II

Painting, sculpture and architecture from the Italian Renaissance to the Contemporary Period. Stylistic classification of major works of art.
3 Cr. Fall GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 6: HUMANITIES AND FINE ARTS

ART 309 Topics in Art

Intensive study in a special art topic. Topic will be announced in class schedule. May be repeated to a maximum of 9 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
3 Cr. DEMAND

ART 311 Drawing I

Personal vision, expression and mixed media in variety of scales. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. DEMAND

Student Learning Outcomes

1. Work with visual elements in two dimensions and color and demonstrate competency in drawing.
2. Conceive and execute projects demonstrating perceptual acuity, conceptual understanding, and technical facility.
3. Employ processes, media, and a variety of scales in creating work.
4. Discuss work effectively in relation to contemporary issues, theories, or practices.
5. Create work whose vision and expression is beyond the foundation level.

ART 312 Drawing II: Studio Investigations

Studio in drawing that investigates materials, media, installation, scale, formats, or series in relation to conceptual, expressive, and cultural approaches. May be repeated for a maximum of 12 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 311 or ART 315 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate ability to apply principles of design and color and competency in drawing.
2. Demonstrate perceptual acuity, conceptual understanding, technical facility, and increasing sophistication in conceiving and executing works.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 315 Life Drawing

Human proportion, anatomy and figure composition. Drawing from models. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. DEMAND

Student Learning Outcomes

1. Work with two-dimension visual elements and render human form competently.
2. Conceive and execute projects demonstrating perceptual acuity, conceptual understanding, and technical facility.
3. Draw from models and employ a variety of processes and media as appropriate to explore proportion, anatomy, and figure composition.
4. Discuss work effectively in relation to contemporary issues, theories, or practices.
5. Create work whose vision and expression is beyond the foundation level.

ART 320 Intermediate Graphic Design Studio I: Production

The process of taking raw designs through to production; planning, electronic pre-press, color, proofing. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 220, ART 221 3 Cr. DEMAND

Student Learning Outcomes

1. Identify, research, analyze, and solve communication problems.
2. Create and develop visual form in response to communication problems.
3. Apply principles of visual organization/composition, information hierarchy, symbolic representation, typography, aesthetics, and the construction of meaningful images.

4. Analyze and apply production processes including electronic pre-press.

ART 321 Intermediate Graphic Design Studio II, Web Design

Developing skills for web design in creative project work that includes a focus on process, interactivity and usability. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 220, ART 221 3 Cr. DEMAND

Student Learning Outcomes

1. Identify, research, analyze, and solve communication problems in a web environment.
2. Create and develop visual form in response to communication problems.
3. Apply principles of visual organization/composition, information hierarchy, symbolic representation, typography, aesthetics, and the construction of meaningful images as applicable to web design.
4. Identify and use appropriate processes, tools, and technology to create web design that effectively applies principles of interactivity, interface, and usability.

ART 322 Intermediate Graphic Design Studio III: 3-D Problems

Three-dimensional projects, including package/product, exhibit and architectural graphics. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 220, ART 221 3 Cr. DEMAND

Student Learning Outcomes

1. Identify, research, analyze, and solve communication problems related to package/product design, exhibition design, and architectural graphics.
2. Use three-dimensional form in response to communication problems.
3. Apply principles of visual organization/composition, information hierarchy, symbolic representation, typography, aesthetics, and the construction of meaningful images as applicable to three-dimensional design.
4. Identify and use appropriate processes, tools, and technology to solve thee-dimensional communication problems.

ART 323 Intermediate Graphic Design IV: Research and Investigation with Technology

Research and design projects associated with current technological trends. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 320, ART 321 3 Cr. DEMAND

Student Learning Outcomes

1. Develop successful strategies for learning how to learn new technologies.
2. Find and solve complex design problems using emergent media.
3. Create and apply personalized design processes.
4. Research current trends in the field (tools, techniques and developments).
5. Apply interdisciplinary approaches to creative research, design and production.

ART 332 History of Graphic Design

Survey of history of graphic design from the Lascaux Caves to the Internet. Graphic design minors require departmental permission.
Prereq.: ART 220 or ART 221 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate knowledge of design history and ability to identify, theory, and criticism from a variety of perspectives, including those of art history, linguistics, communication and information theory, technology, and the social and cultural use of design objects.

ART 333 Art and Literature

Interdisciplinary exploration of differences, similarities, and relations between art and literature as means of communication, individual expression, and cultural formation.
3 Cr. DEMAND GOAL AREA 6: HUMANITIES AND FINE ARTS

ART 340 Painting I

Concepts, materials, and techniques. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. DEMAND

Student Learning Outcomes

1. Work competently with visual elements in two dimensions and color.

2. Conceive and execute projects demonstrating perceptual acuity, conceptual understanding, and technical facility.
3. Employ a variety of processes, materials, and techniques in creating work.
4. Discuss work effectively in relation to contemporary issues, theories, or practices.
5. Create work whose vision and expression is beyond the foundation level.

ART 341 Painting II: Studio Investigations

Studio in painting that investigates materials, media, installation, scale, formats, or series in relation to conceptual, expressive, and cultural approaches. May be repeated for a maximum of 12 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 340 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate ability to apply principles of design and color and competency in drawing in relation to painting.
2. Demonstrate perceptual acuity, conceptual understanding, technical facility and increasing sophistication in conceiving and executing works.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 350 Printmaking I

Basic print techniques including intaglio (etching) and engraving. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate ability to work with visual elements in two dimensions and color.
2. Demonstrate perceptual acuity, conceptual understanding, and technical facility in conceiving and executing projects.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 351 Printmaking II

Print techniques including silkscreen and relief/woodcut. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate ability to work with visual elements in two dimensions and color.
2. Demonstrate perceptual acuity, conceptual understanding, and technical facility in conceiving and executing projects.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 352 Printmaking III: Studio Investigations

Advanced techniques using a variety of printmaking processes. Emphasis on conceptual development. May be repeated for a maximum of 12 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 350 or ART 351 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate ability to work with visual elements in two dimensions and color.
2. Demonstrate perceptual acuity, conceptual understanding, technical facility, and increasing sophistication in conceiving and executing works.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 360 Sculpture I

Three-dimensional work in a variety of materials, understanding form and the basic elements of sculpture. Art minors require departmental permission. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. DEMAND

Student Learning Outcomes
1. Create form and work competently with visual elements in three dimensions.
2. Conceive and execute projects demonstrating perceptual acuity, conceptual understanding, and technical facility.
3. Use technologies and equipment as applicable.
4. Employ a variety of materials and processes.
5. Discuss work effectively in relation to contemporary issues, theories, or practices.
6. Create work of quality beyond the foundation level.

ART 361 Sculpture II: Studio Investigations
Studio in three-dimensional work investigating materials, media, installations, site specificity, scale, formats, or series. May be repeated for a maximum of 12 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate ability to work with visual elements in three dimensions.
2. Demonstrate perceptual acuity, conceptual understanding, technical facility and increasing sophistication in conceiving and executing projects.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 370 Ceramics I
Materials, processes and techniques, including handbuilding, throwing, glazing and firing. Art minors require departmental permission. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. DEMAND

Student Learning Outcomes
1. Create form and work competently with visual elements in three dimensions.
2. Conceive and execute projects demonstrating perceptual acuity, conceptual understanding, and technical facility.
3. Use technologies and equipment as applicable.
4. Employ a variety of materials and processes and techniques including handbuilding, throwing, glazing and firing.
5. Discuss work effectively in relation to contemporary issues, theories, or practices.
6. Create work of quality beyond the foundation level.

ART 371 Ceramics II: Studio Investigations
Studio investigating ceramics materials, processes, and techniques in relation to scale, series, and installation. May be repeated for a maximum of 12 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 370 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate ability to work with visual elements in three dimensions.
2. Demonstrate perceptual acuity, conceptual understanding, technical facility and increasing sophistication in conceiving and executing ceramics projects.
3. Demonstrate working knowledge of technologies and equipment as applicable to ceramics.
4. Demonstrate understanding of a variety of processes that pertain to throwing, handbuilding, casting, glazing, and firing.
5. Demonstrate ability to discuss work in relation to contemporary issues in ceramics.

ART 381 Multimedia
Personal and cultural-based works employing a variety of media and materials. May be repeated to a maximum of 6 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105, ART 202 3 Cr. DEMAND

ART 382 Digital Tools for Art Making
Current issues especially associated with digital technologies addressed in contemporary art. May be repeated to a maximum of 6 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, 105, ART 202 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate ability to work with visual elements in digital media.
2. Demonstrate perceptual acuity, conceptual understanding, and technical facility in conceiving and executing projects.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 383 Video I
Shooting and editing digital video. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105, 202 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate ability to work with visual elements in digital video media.
2. Demonstrate perceptual acuity, conceptual understanding, and technical facility in conceiving and executing projects.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 384 Video II: Studio Investigations
Intermediate and advanced editing. Creation of portfolio developing artistic vision. May be repeated for a maximum of 6 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 383 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate ability to work with visual elements digital video media.
2. Demonstrate perceptual acuity, conceptual understanding and technical facility in conceiving and executing projects.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.
6. Demonstrate an increasing sophistication in conceiving and executing projects.

ART 385 Photography I
Photography using digital media. Digital camera with manual controls required. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate ability to work with visual elements in photographic media.
2. Demonstrate perceptual acuity, conceptual understanding, and technical facility in conceiving and executing projects.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 386 Photo II: Studio Investigations
Intermediate and advanced skills and concepts in photography. Creation of portfolio that expresses developing artistic vision. May be repeated for a maximum of 6 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 385 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate ability to work with visual elements in photographic media.
2. Demonstrate perceptual acuity, conceptual understanding, technical facility, and increasing sophistication in conceiving and executing projects.
3. Demonstrate working knowledge of technologies and equipment as applicable.
4. Demonstrate understanding of processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 389 The Performative and Conceptual Art
Studio course using a performative approach to create conceptually oriented visual art. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.

Prereq.: ART 101, ART 102, ART 103, ART 104, ART 105, ART 202 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate the ability to work with visual and conceptual elements in performance art.
2. Conceive and execute projects using perceptual acuity, conceptual understanding, and technical facility.
3. Demonstrate ability to use knowledge of technologies and equipment as applicable.
4. Demonstrate ability to apply processes.
5. Demonstrate ability to discuss work in relation to contemporary issues, theories, or practices.

ART 390 Visual Arts in the Secondary School

Analysis and demonstration of methods and procedures of creative art activities during adolescence. Art Education majors only.
Prereq.: Praxis I, PPST 3 Cr. Fall

Student Learning Outcomes

1. Identify philosophical influences, historical foundations, and pedagogical approaches in visual art instruction.
2. Demonstrate how to budget an art program and manage and organize the art classroom.
3. Create and teach meaningful and appropriate art lessons that demonstrate planning, instruction, assessment, and self-reflection.
4. Identify and demonstrate the safe use of tools, equipment, materials, and processes in visual art education learning environments.
5. Identify and apply educational principles relevant to the physical, social, emotional, moral, and cognitive development of children, preadolescents, and adolescents.
6. Identify and apply research based best practices for effective teaching of the visual arts in primary, intermediate, and middle and high school education.
7. Develop a teaching portfolio showcasing knowledge, skills, and disposition for the teaching of K-12 visual arts.

ART 395 Visual Art in the Elementary School

Language of art, visual thinking, and interpreting and analyzing artwork. Art Education Majors and Minors only.
2 Cr. Fall

Student Learning Outcomes

1. Identify and teach art lessons using the foundations and creative processes of the visual arts.
2. Identify and apply strategies for nurturing artistic modes of expression and metaphorical thinking to explore the physical world, needs of other people, and personal interests.
3. Identify the characteristics of children+s developmental stages in the visual arts, the relationship between print and image, and how both impact comprehension.
4. Demonstrate how the artistic process can be used for teaching all curriculum areas by integrating and infusing arts learning.
5. Identify and demonstrate how literature, literacy and the arts combine to introduce children to verbal and visual literacies.
6. Use self-reflection as a tool for learning and growth.
7. Compare and contrast connections among visual artworks, their purposes, and their personal, social, cultural and historical contexts, including those of Minnesota.

ART 396 Visual Art for Elementary Classrom Teachers

Language of art, visual thinking, and interpreting and analyzing artwork. Elementary Education Majors only.
2 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and teach art lessons using the foundations and creative processes of the visual arts.
2. Identify and apply strategies for nurturing artistic modes of expression and metaphorical thinking to explore the physical world, needs of other people, and personal interests.
3. Identify the characteristics of children+s developmental stages in the visual arts, the relationship between print and image, and how both impact comprehension.
4. Demonstrate how the artistic process can be used for teaching all curriculum areas by integrating and infusing arts learning.
5. Identify and demonstrate how literature, literacy and the arts combine to introduce children to verbal and visual literacies.
6. Use self-reflection as a tool for learning and growth.
7. Compare and contrast connections among visual artworks, their purposes, and their personal, social, cultural and historical contexts, including those of Minnesota.

ART 401 Interdisciplinary Studio

Open studio format emphasizing cross-media dialogue. Development and presentation of professional entry-level body of work. Can be repeated for a total of 6 credits. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 201, ART 202, emphasis core 3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate ability to work independently.
2. Demonstrate an understanding of the similarities, differences, and relationships among various fine arts areas.
3. Demonstrate ability to identify and address art problems by combining, as appropriate to the issue, capabilities in studio, analysis, history, and technology (conceptualization and critique).
4. Demonstrate a working knowledge of various aesthetic issues, processes, and media and their relationship to the conceptualization, development, and completion of works of art (production).
5. Demonstrate a professional, entry-level sophistication in conceiving and executing projects.

ART 402 Senior Seminar

Capstone seminar on professional practices for studio artists. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 401, Emphasis core, see additional information 3 Cr. Fall

Student Learning Outcomes
1. Demonstrate ability to place work in historical, cultural, and stylistic contexts.
2. Demonstrate ability to place work in relation to current major issues, processes, and directions in the field.
3. Demonstrate ability to form and defend value judgments about art.
4. Demonstrate ability to communicate ideas, concepts, and requirements to professionals and lay persons related to practices.
5. Demonstrate a professional, entry-level sophistication in presenting work.

ART 420 Advanced Graphic Design Studio I: System Graphics

System graphics, corporate identity and information graphics. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 320, ART 321, ART 322 3 Cr. DEMAND

Student Learning Outcomes
1. Identify, research, analyze, and solve communication problems related to design systems, brand identity, and information design.
2. Create and develop visual form in response to communication problems.
3. Apply principles of visual organization/composition, information hierarchy, symbolic representation, typography, aesthetics, and the construction of meaningful images as related to design systems, brand identity, and information design.
4. Identify and use appropriate processes, tools, and technology to create design systems, brand identity, and information design.

ART 421 Advanced Graphic Design Studio II: Interactive Design

Current applications and design principles essential for creating interactive projects. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 320, ART 321, ART 322 3 Cr. DEMAND

Student Learning Outcomes
1. Identify, research, analyze, and solve communication problems applicable to interactive design.
2. Create and develop visual form in response to communication problems related to interactive design.
3. Apply principles of visual organization/composition, information hierarchy, symbolic representation, typography, aesthetics, and the construction of meaningful images as applicable to interactive design.
4. Identify and use appropriate processes, tools, and technology for interactive design.

ART 422 Advanced Graphic Design Studio III: Professional Practice

Senior seminar on managing design, costs, schedules, quality, copyright, and ethics. Results of design activity on the physical and aesthetic environment. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Prereq.: ART 320, ART 321, ART 322 3 Cr. DEMAND

Student Learning Outcomes
1. Identify principles of managing design, schedules, and quality.
2. Read about, write reflectively on, and discuss current practices and processes, ethical standards, and legal issues, including copyright use.
3. Create professional documents such as resumes, letters, and project summaries.
4. Organize and synthesize a complete body of work for a professional portfolio.
5. Develop and prepare a print and online portfolio for professional presentation.
6. Engage in professional advancement opportunities provided by competitions, lectures, professional organizations, and external resources.
7. Conduct interviews with professionals to learn about current practices and receive feedback on portfolio work.

ART 433 Asian Art History (Diversity)
Historical, traditional and contemporary art with emphasis on India, China, and Japan. Fulfills the university's upper-division writing requirement.
3 Cr. Even Fall GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

Student Learning Outcomes
1. Describe and analyze works of art/artifacts/design/architecture.
2. Evaluate and respond critically to works of art/artifacts/design/architecture.
3. Place works of art/artifacts/design/architecture in historical, cultural and stylistic contexts.
4. Use tools and techniques of scholarship such as researching, writing, or presenting information about or perspectives on works of art.

ART 434 African Art History (Diversity)
Traditional and contemporary visual arts of North Africa, West Africa, Central Africa, Eastern Africa, and Southern Africa. Fulfills the university's upper-division writing requirement.
3 Cr. Odd Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

Student Learning Outcomes
1. Describe and analyze works of art/artifacts/design/architecture.
2. Evaluate and respond critically to works of art/artifacts/design/architecture.
3. Place works of art/artifacts/design/architecture in historical, cultural and stylistic contexts.
4. Use tools and techniques of scholarship such as researching, writing, or presenting information about or perspectives on works of art.

ART 435 Art History of the Americas (Diversity)
Traditional and contemporary visual arts of the Americas. Fulfills the university's upper-division writing requirement.
3 Cr. Odd Fall GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

Student Learning Outcomes
1. Describe and analyze works of art/artifacts/design/architecture.
2. Evaluate and respond critically to works of art/artifacts/design/architecture.
3. Place works of art/artifacts/design/architecture in historical, cultural and stylistic contexts.
4. Use tools and techniques of scholarship such as researching, writing, or presenting information about or perspectives on works of art.

ART 436 International Modernisms
Movements, artists and concepts of modernism. Fulfills the university's upper-division writing requirement.
3 Cr. Fall

Student Learning Outcomes
1. Place works of art/artifacts/design/architecture in historical, cultural and stylistic contexts.
2. Describe and analyze works of art/artifacts/design/architecture.
3. Evaluate and respond critically to works of art/artifacts/design/architecture.
4. Use tools and techniques of scholarship such as researching, writing, or presenting information about or perspectives on works of art.

ART 437 Contemporary Art
Major directions in contemporary visual arts. Fulfills the university's upper-division writing requirement.
3 Cr. Spring

Student Learning Outcomes
1. Place works of art/artifacts/design/architecture in historical, cultural and stylistic contexts.
2. Describe and analyze works of art/artifacts/design/architecture.
3. Evaluate and respond critically to works of art/artifacts/design/architecture.
4. Use tools and techniques of scholarship such as researching, writing, or presenting information about or perspectives on works of art.

ART 438 Theories

Exploration of historical and contemporary theories pertaining to art and art history. Fulfills the university's upper-division writing requirement.
Prereq.: 6 credits of art history. 3 Cr. Even Fall

ART 439 Topics in Art History

Art history topics within the academic specialties of current faculty or those of visiting scholars or study abroad programs. Fulfills the university's upper-division writing requirement. May be repeated with different topics to a maximum of 12 credits.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Place works of art/artifacts/design/architecture in historical, cultural and stylistic contexts.
2. Describe and analyze works of art/artifacts/design/architecture.
3. Evaluate and respond critically to works of art/artifacts/design/architecture.
4. Use tools and techniques of scholarship such as researching, writing, or presenting information about or perspectives on works of art.

ART 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program. Students must have passed their portfolio review (benchmark) or have departmental permission to enroll in 300-400 level studio courses.
Coreq.: 1-16 Cr. DEMAND

Student Learning Outcomes

1. Apply principles of graphic design, art, or art history in a professional environment.
2. Engage in professional practice.
3. Describe and evaluate the internship experience.

ART 490 Folk, Ethnic, and Indigenous Art (Diversity)

Studio course in folk, ethnic, and indigenous art from historical and contemporary perspectives.
3 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

Astronomy (ASTR)

ASTR 105 Astrobiology

The origin, evolution, and distribution of life in the universe, astronomical constraints on life, and the scientific techniques used to search for extraterrestrial life on planets and moons.
3 Cr. DEMAND GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

ASTR 106 Concepts of the Solar System

The appearance of the sky, constellation identification, history of astronomy, planetary motion, physical properties of planets, the moon, sun, and minor bodies, telescopes. The planetarium will normally be used as an integral part of this course.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

ASTR 107 Concepts of Stars and the Universe

Scale of the universe; distance, structure, and evolution of stars; the Milky Way and other galaxies; cosmology, life in the universe.
3 Cr. Fall | Spring GOAL AREA 2: CRITICAL REASONING | GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

ASTR 120 Archaeoastronomy (Diversity)

Comparative study of the astronomies, cosmologies, and sciences of ancient civilizations. How the physical environment affected observations. Connections between science and religion.
3 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

ASTR 205 General Astronomy

Basic properties and physical processes of the solar system, stars, and stellar systems.
Prereq.: PHYS 231 or PHYS 234 4 Cr. Fall GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

ASTR 311 Solar System Astronomy

Physical processes in the solar system. Application of physics to the study of the motions, atmospheres, structure, and composition of bodies in the solar system.
Prereq.: PHYS 234 3 Cr. Odd Fall

Student Learning Outcomes

1. Discuss physical properties of solar system bodies.
2. Analyze physical formation properties of solar systems.

3. Describe mathematically and physically orbital motion and conditions for stability.

ASTR 312 Stellar Astronomy

Physical processes in stars and stellar systems. Stellar astronomy and applications of physical principles.
Prereq.: PHYS 235 3 Cr. Even Spring

Student Learning Outcomes

1. Analyze formation and evolution of stars, their categorization and physical properties.
2. Discuss atmospheres, energy (light) spectral emission properties, and (nuclear reactions as) sources.
3. Prepare and present a research project in the field of Stellar Astronomy.

ASTR 323 Observational Astronomy

Modern astronomical observing techniques and instrumentation. Coordinate systems, telescope design, detector systems, error analysis, photometry, spectroscopy, and imaging.
Prereq.: PHYS 235 3 Cr. Even Fall

Student Learning Outcomes

1. Calculate observational parameters such as position, brightness, and time for astronomical objects.
2. Analyze astronomical images and data.
3. Solve astronomical problems with observational data and the use of computers.
4. Operate an array of available telescopes and binoculars.

ASTR 405 Introduction to Planetarium Operation

Use of the planetarium projector to show important sky motions, appearance of the sky from different places on the Earth, seasonal passage and bright constellations. Student will create and perform a planetarium program.
Prereq.: ASTR 311 or equivalent or consent 1 Cr. DEMAND

Student Learning Outcomes

1. Operate and control the planetarium hardware, lighting, and sound system.
2. Prepare and present a planetarium show on a topic of current interest.
3. Develop engaging communication strategies for educational and outreach activities.

ASTR 421 Selected Topics in Astronomy

Lectures, readings and/or discussion on selected topics in astronomy, astrophysics, or planetary science. May be repeated to maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Discuss selected topics in astronomy and astrophysics based upon the literature.
2. Analyze quantitative details (observational data and/or mathematical models) for special problems in astrophysics.
3. Solve problems related to topics in planetary science.

ASTR 427 Galaxies and Cosmology

Galactic structure and kinematics; properties and evolution of galaxies and quasars; the basic principles of cosmology.
Prereq.: PHYS 235 3 Cr. Odd Spring

Student Learning Outcomes

1. Describe and classify the primary components of the Milky Way Galaxy and assess the sun's location and motion in it.
2. Identify, describe, and classify all types of galaxies and active galactic nuclei by physical and spectroscopic morphologies 3. Calculate distances, masses, brightnesses, and motions of other galaxies and their components.
4. Compare various cosmological models with available observational data.

ASTR 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

ASTR 485 Workshop: Observational Astronomy

Designs of small telescopes and their operation, techniques for locating and observing astronomical objects with a small telescope.
Prereq.: ASTR 205 or consent 1 Cr. Summer

Student Learning Outcomes

1. Operate an array of available telescopes and binoculars.
2. Locate and identify astronomical objects using star charts and coordinate schemes.
3. Compare and contrast telescopic designs and their uses.

Atmospheric and Hydrologic Sciences (AHS)

AHS 104 Introduction to Atmospheric Science
Introductory study of the earth's weather. Topics include atmospheric composition, earth's energy budget, atmospheric motions, clouds and precipitation, climate change, measurement of weather data and interpretation of weather maps.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

AHS 105 The Water Environment
Hydrology and physical oceanography. The water cycle and water movement on and beneath the Earth's surface: rivers, lakes, and ground water. Environmental significance of floods, droughts, and water resources management.
3 Cr. DEMAND GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

AHS 106 Natural Hazards and Human Society
Interaction of human societies with natural hazards spanning atmospheric, hydrologic and geologic processes is discussed based upon in-depth case studies. Effect of the hazards on human society and the effect of human action on exacerbating the hazards.
3 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES | GOAL AREA 10: ENVIRONMENTAL ISSUES

AHS 109 Introduction to Environmental Geology
Geology of the dynamic earth with emphasis on interactions between humans and the geologic environment. Earth materials, earth resources, the properties of rocks and surficial deposits.
3 Cr. Fall | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

AHS 160 Professional Meteorology
Overview of the requirements and career choices for meteorologists. Survey of recent developments, educational demands and student opportunities.
1 Cr. Fall

AHS 205 Earth Systems for Teachers
Movement of energy and matter through the earth system. Earth materials, structure, and properties. Water, rock, and elemental cycles. Weather, climate, geologic time, fossils, rocks and minerals, topographic and geologic maps. Physical, computer, and mathematical models of earth processes.
Prereq.: CHEM 160, CHEM 210 5 Cr. Spring

AHS 220 Physical Geology
Earth materials and plate tectonics are used to investigate deeply-buried, plutonic igneous and metamorphic systems and surface systems including sedimentary, fluvial and glacial.
Prereq.: CHEM 210 or high school physics and chemistry. 4 Cr. Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

AHS 230 Introduction to Physical Hydrology
Basic physical oceanography, elementary principles of hydrodynamics with applications to surface and groundwater hydrology.
Prereq.: MATH 112 or equivalent or permission of instructor 4 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

AHS 260 Introductory Meteorology
Atmospheric structure and processes, including radiant energy, humidity, clouds, winds, global circulations, weather map interpretation, climate regimes, air pollution and climate change issues, severe weather, calculation of physical processes.
4 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

AHS 275 Atmospheric Kinematics
Kinematics of atmospheric flows using vector concepts and operations including vector functions, dot products, cross products, gradients, divergence, and curl. Applications from atmospheric fluid dynamics.
Prereq.: MATH 221 and PHYS 234 Coreq.: Cr. Spring

Student Learning Outcomes
1. Apply the chain rule to meteorological functions of more than one variable 2. Apply dot products and gradients to compute advection of meteorological variables 3. Apply cross products and gradients to compute the geostrophic wind 4. Apply the curl operator to compute vorticity 5. Apply divergence to mass conservation

AHS 280 Weather Analysis
Analysis of weather data, surface and upper-air charts, and derived fields. Structure and evolution of weather systems in the mid-latitudes. Analysis of current weather. Operational weather forecasting.
Prereq.: AHS 260 Coreq.: CSCI 172 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze troughs, ridges, highs, lows, and fronts on weather maps 2. Identify areas of vorticity and temperature advection 3. Diagnose potential for cyclone growth/decay 4. Create weather maps and charts using observed data and model output
5. Diagnose the three-dimensional distribution of clouds and precipitation in observations and forecasts

AHS 285 Weather Analysis and Forecasting
Analysis of weather data, surface and upper air charts, and derived fields. Discussion of current weather with application of physical principles to data analysis and forecasting. Operational weather forecasting.
Prereq.: AHS 260 2 Cr. Fall | Spring

Student Learning Outcomes
1. Decode and interpret surface station observations.
2. Analyze surface charts and diagnose surface pressure centers and fronts.
3. Identify lifting mechanisms associated with fronts and cyclones on upper level charts.
4. Apply principles of boundary layer mixing and radiation balance to surface maximum and minimum temperature forecasting.

AHS 305 Historical Geology
Evolution of the earth with emphasis on biological and physical events of the stratigraphic record. Field work.
Prereq.: AHS 205 or AHS 220 3 Cr. Even Fall

AHS 307 Field Geology
Field based problem solving of local geological relationships in central Minnesota. Field trips to geologically significant areas.
Prereq.: AHS 220 3 Cr. Odd Fall

AHS 322 Surficial and Glacial Geology
Geologic processes responsible for the development of landforms. Glacial geology will be strongly considered.
Prereq.: AHS 220 3 Cr. Even Spring

AHS 325 Rocks and Minerals
Physical and chemical properties of minerals, and igneous, sedimentary, and metamorphic rocks. Hand-sample identification.
Prereq.: AHS 220 4 Cr. Odd Spring

Student Learning Outcomes
1. Students will test, describe, and identify rocks and minerals in hand samples.
2. Students will discuss and use the classification of rocks and minerals according to standard schemes.
3. Students will relate mineral properties to crystal structure.
4. Students will use phase diagrams as they relate to the origin of rocks and minerals.
5. Students will demonstrate an understanding of the genesis of igneous, metamorphic and sedimentary rocks.
6. Students will use microscopes to study rock and mineral samples in drill cuttings.

AHS 332 Physical Hydrogeology
Aquifer characteristics and geologic controls on ground-water occurence. Ground-water movement; regional ground-water flow, and ground-water interactions with wetlands, lakes and streams. Well hydraulics and water supply, vadose zone processes.
Prereq.: AHS 220, AHS 230 4 Cr. Fall

AHS 334 Surface Hydrology
Conceptual basis and modeling of hydrologic processes on Earth's surface: precipitation, infiltration, evaporation, runoff. Rainfall-runoff transformation at the watershed level. Hydrologic routing of floods. Applications to water resource management and environmental problems.
Prereq.: AHS 230 4 Cr. Fall

Student Learning Outcomes
1. Apply the principle of conservation of mass (water budget) to different hydrologic reservoirs (lakes and reservoirs, rivers, watersheds) to predict their hydrologic responses, quantify hydrologic driving mechanisms, and predict alterations on the natural hydrologic system responses due to engineering.
2. Examine the physics of basic hydrologic processes such as evaporation, evapotranspiration, infiltration, snowmelt and quantify these processes under different real-world situations or problems using conceptual or analytical models.
3. Apply statistical principles and concepts to the analysis of time series such as precipitation and discharge. Apply known theoretical probability distributions to the analysis of floods, duration of flows for reservoir control, or treatment plant and hydroelectric power plant operations.
4. Predict and explain the response of watersheds to precipitation or snow-melting events using the unit

hydrograph theory with infiltration models. Apply to cases of gaged and non-gaged watersheds.
5. Predict and evaluate the results of different hydrologic routing models to lakes or rivers. Analyze and quantify flood propagation, attenuation, celerities and volumes.

AHS 336 Chemical Hydrogeology

Ground-water chemistry, ground-water contamination, and remediation. Principles of aquatic chemistry; chemistry of natural ground waters; water-quality standards; contaminant detection and migration; remediation and treatment techniques; and ground-water risk assessment.
Prereq.: AHS 230, CHEM 160, CHEM 210 3 Cr. Spring

AHS 338 River Hydraulics

Open channel flows and basic hydraulics. Flow resistance in rivers from a fluid mechanics perspective. Non-uniform flow and principles of hydraulic routing of floods. Modeling and applications to design. Sediment transport in alluvial channels. Basics of fluvial geomorphology and fluvial hydraulics.
Prereq.: AHS 220, AHS 230, MATH 221 Coreq.: PHYS 234 4 Cr. Spring

Student Learning Outcomes

1. Apply the principles of conservation of mass and mechanical energy to the analysis of 1-dimensional open-channel flows. Evaluate, from physical and design perspectives, the applicability and limitations of Bernoulli's principle to prediction of 1-d open-channel flows.
2. Apply the momentum principle to examples of open-channel flows such as hydraulic jumps or supercritical flows. Analyze uniform flows and evaluate applicability to natural or artificially created open-channel flows.
3. Predict water surface profiles using numerical solutions of the governing equations under steady flow conditions, for realistic cases such as lake connections and natural or man-made rivers. Derive hydraulic performance graphs using the general theory of backwater profiles.
4. Synthesize major (basic) elements of the unsteady flow theory, and the derivation of the Saint-Venant (shallow-water) equations. Apply basic concepts of this theory to the analysis of hydraulic routing of floods, and the use of standard hydraulic models.

AHS 360 Aviation Meteorology

Atmospheric structure, processes, events, and observations of special significance to aviation, including charts and weather maps, data formats, forecast products, hazards to flight, and jet streams. Credit for meteorology majors only with prior approval.
Prereq.: AHS 104, PHYS 231 4 Cr. Spring

AHS 364 Instrumentation

Physical principles of measurement using meteorological and hydrological instruments. Sensor types and characteristics, performance standards, sources of errors, exposure. Statistical analysis of data.
Prereq.: AHS 260 Coreq.: PHYS 237 3 Cr. Fall

AHS 365 Atmospheric Thermodynamics

Equation of state for the atmosphere, first and second laws of thermodynamics, Clausius-Clapeyron equation, thermodynamics of dry and moist air, hydrostatics, thermodynamic diagrams, stability.
Prereq.: AHS 260, MATH 221, CHEM 160 Coreq.: PHYS 234 3 Cr. Spring

AHS 367 Meteorological Analysis Software

Acquisition, processing, and plotting of weather data from an array of sources and in a variety of formats using software packages common to the meteorological community.
Prereq.: CSCI 172, AHS 280 2 Cr. Fall

Student Learning Outcomes

1. Collect and analyze weather data in multiple formats.
2. Plot multiple forms of weather data in a scientifically and operationally useful and appropriate manner.
3. Develop scripts and programs to control the processing of data.
4. Compare data from multiple sources.

AHS 368 Radar and Satellite Meteorology

Interpretation of visible and infrared satellite imagery; global observations of temperature and moisture. Tropical meteorology and tropical cyclones, especially as observed by satellite. Weather radar methodology and observations; Doppler and dual-polarization radar techniques. Thunderstorm structure, detection, and analysis, especially as observed by radar and satellite. Lab.
Prereq.: AHS 260 3 Cr. Fall

Student Learning Outcomes

1. Explain why and how meteorologists use remote sensing to determine the state of the atmosphere 2. Describe the technical processes used by radar 3. Describe the technical processes used by weather satellites 4. Identify the features of and explain processes driving thunderstorms and thunderstorm complexes 5. Identify the features of and explain processes driving hurricanes and tropical weather 6. Analyze and interpret weather systems at multiple scales using remotely sensed data

AHS 375 Atmospheric Dynamics

Atmospheric forces, equations of motion in rotating coordinate system. Geostrophic, gradient, and thermal winds. Circulation and vorticity.
Prereq.: AHS 275, AHS 365, PHYS 234, MATH 222 3 Cr. Fall

AHS 385 Synoptic Meteorology

Analysis of mid-latitude weather systems. Frontogenesis, jet streak circulations, and other lifting mechanisms. Alternative front and cyclone models.
Prereq.: AHS 285, AHS 375 3 Cr. Spring

AHS 387 Broadcast Meteorology

Preparation and broadcast of radio and television forecasts through hands-on exercises. Heavy emphasis on creative writing skills and chroma-key techniques. Employment opportunities and their development. Several classes held at Twin-Cities television studios.
Prereq.: AHS 380 2 Cr. Even Spring

AHS 401 Earth Sciences Field Studies (Topical)

Selected field trips to examine exemplary environments and apply field techniques. Minimum of five days spent at natural areas such as Grand Canyon and the Florida Keys. Arranged instructional sessions may be required before or after trip. Extra fees. By permission only. Repeated with advisor approval to maximum of 9 credits.
Coreq.: 1-3 Cr. DEMAND

AHS 420 Seminar

Lectures, readings, discussions on selected topics. May be repeated.
Coreq.: 1-3 Cr. Fall | Spring

AHS 423 Sedimentation and Stratigraphy

Sedimentary processes and environments, formation of sedimentary rocks, stratigraphy, and basin analysis. Use of stratigraphic principles to interpret earth history.
Prereq.: AHS 220 3 Cr. Odd Fall

AHS 424 Structural Geology and Tectonics

Brittle and ductile deformation. Stress and strain theory. Structural interpretation problems. Development and significance of plate tectonics as a unifying theory for geology.
Prereq.: AHS 220, AHS 305 4 Cr. DEMAND

AHS 425 Petrography

Principles of optical mineralogy. Thin-section identification of minerals and rocks. Petrogenesis of igneous, sedimentary, and metamorphic rocks.
Prereq.: AHS 325 or permission of the instructor 3 Cr. DEMAND

AHS 432 Ground-Water Modeling

Ground-water modeling from theoretical and practical perspectives. Principles of applied mathematical modeling-analytical, numerical, and stochastic models; modeling of ground-water flow; and modeling of contaminant transport.
Prereq.: AHS 332, GEOG 316 2 Cr. Fall

AHS 434 Surface Water Modeling

Computer-based modeling and simulations of watershed hydrology and river hydraulics. Numerical analysis applied to hydrologic transport and storage equations used in hydrology software. Modeling of basin hydrology and of river hydraulics. Other software used in surface hydrology. Software limitations and applicability.
Prereq.: AHS 332, AHS 334, AHS 338, MATH 222 2 Cr. Fall

AHS 438 Water Resources Management

Scientific, engineering, historical, political, economic, and social aspects of water-resource management, allocation, and conflict. Characterization of water supply and demand. Application of quantitative hydrologic analysis to flooding, drought, water quality, and surface and subsurface basin management.
Prereq.: AHS 332, AHS 334 3 Cr. Odd Spring

Student Learning Outcomes

1. Students will discuss and give examples of historic and modern water-resource issues from North America and around the world. Identify affected or involved persons and groups; their concerns and viewpoints; and predict possible future events.

2. Students will describe current and historic water allocation and protection policy and law.
3. Students will describe the interdisciplinary nature of management and decision-making processes that involve use of water resources. Identify political, legal, economic, ecologic, and other non-scientific factors, as well as describing hydrologic resource problems in terms of scientific and engineering characteristics.
4. Students will compare various approaches to hydrologic analysis and decision making: engineering, economic, and systemic/ecologic/scientific.
5. Students will demonstrate appropriate use of available quantitative tools commonly applied in hydrologic analysis during decision-making and management of water resources. Describe the role of hydrologic analysis in such processes.
6. Students will choose and use appropriate quantitative techniques, mathematical models, and computers to solve problems involving surface and sub-surface water resources, in particular, problems involving flood and drought risk analysis, contamination vulnerability assessment, basin and stream management, and aquifer management.

AHS 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Research and obtain an internship position with a governmental, non-governmental, or industry organization relevant to their major.
2. Conduct their internship duties in a professional manner to the satisfaction of the site supervisor and academic advisor.
3. Report on their experiences to the department with a written report.

AHS 451 Senior Research Proposal

Description of the senior research project or study. Examination of procedural steps and tools available at SCSU for completing the research project. Preparation of a proposal for a viable research project or study.
Prereq.: Permission of instructor 1 Cr. Spring

Student Learning Outcomes

1. Students will demonstrate the ability to access suitable reference material in the earth sciences from both SCSU and non-SCSU sources.
2. Students will prepare a well-written scientific research proposal for a viable research project or study that will form the basis of their work in their Senior Research Project.
3. Students will orally present their proposed research ideas to the class including motivation and background, planned data sources and procedures. This presentation will illustrate how the scientific method is exemplified in the proposed work.

AHS 452 Senior Research Project

Complete a concentrated study or research project in an area of earth and atmospheric science. Complete written and oral presentations of the results.
Prereq.: AHS 451 2 Cr. Fall | Spring

Student Learning Outcomes

1. Students will demonstrate the ability to carry out a research project or study in the earth sciences based upon their proposed project from EAS 451.
2. Students will demonstrate the ability to prepare a well-written scientific research report describing their work.
3. Students will give an effective oral presentation of their work to other members of the class and to other members of the department.

AHS 465 Physical Meteorology

Principles of atmospheric physics including radiation laws, radiative transfer, atmospheric aerosols, cloud microphysics, physics of precipitation formation, atmospheric electricity, atmospheric optics. Meteorological radar.
Prereq.: AHS 365, PHYS 234 3 Cr. Spring

AHS 467 Numerical Weather Prediction

History of numerical prediction, processes to be represented, primitive equations, methods of solution, grid format for data, objective analysis, NAM, GFS and other models, initialization of model, boundary conditions, parameterization.
Prereq.: AHS 375 3 Cr. Spring

AHS 475 Advanced Atmospheric Dynamics

Development and motion of mid-latitude synoptic systems, quasigeostrophic dynamics, linear perturbation theory and waves, atmospheric instability, atmospheric predictability.

Prereq.: AHS 375, MATH 320 or PHYS 346, PHYS 237
3 Cr. Spring

AHS 478 Climate Dynamics

Balance requirements of the climate system, atmospheric and oceanic general circulation, history of earth's climate, causes of climate change, climate modelling with consideration of dynamical systems analysis as well as global coupled models.
Prereq.: AHS 475 3 Cr. Fall

Student Learning Outcomes

1. Students will demonstrate an understanding of the balance requirements of the circulations in the atmosphere and the oceans, and of the interdisciplinary nature of the climate system.
2. Students will demonstrate an understanding of the range of causes of climate change and how they relate to observed changes in the history of earth's climate on a range of time scales, focusing on changes from millenial to interannual time scales.
3. Students will demonstrate an understanding of the natural and anthropogenic contributions to modern climate change. In addition, they will demonstrate a basic understanding of the models used to forecast future climate change and the limitations of those efforts.

AHS 481 Weather Discussion I

Analysis and forecasting of summer through fall weather on hemispheric, continental, and regional scales. Student-led presentations and participation in forecasting competition required.
Prereq.: AHS 385 1 Cr. Fall

AHS 482 Weather Discussion II

Analysis and forecasting of winter through spring weather on hemispheric, continental, and regional scales. Student-led presentations and participation in forecasting competition required.
Prereq.: AHS 385 1 Cr. Spring

AHS 485 Advanced Synoptic Meteorology

Three dimensional analysis of cold and warm season events, jet stream circulations, frontogenesis. Vertical velocity estimates using isentropic analysis of gridded data. Current topics of synoptic research, possible field trips to regional conferences.
Prereq.: ECE 102 3 Cr. Spring

AHS 486 Mesoscale Meteorology

Mesoscale observations and instabilities. Jet-front systems, mesoscale boundaries. Effect of moisture, lift, and shear on severe weather. Thunderstorm, mesocyclone, and tornado formation and propagation.
Prereq.: AHS 385, AHS 475 3 Cr. Fall

AHS 491 Senior Thesis I

Preparation of a proposal for a viable capstone project for majors in meteorology, hydrology, and earth science. Presentation of proposal to the department orally and in writing. Begin work on project under supervision of a faculty member.
2 Cr. Fall | Spring

Student Learning Outcomes

1. Critically evaluate project proposals 2. Synthesize relevant reference material from appropriate sources for project development 3. Demonstrate effective written communication skills
4. Demonstrate effective oral presentation skills

AHS 492 Senior Thesis II

Conclusion of the capstone project for majors in meteorology, hydrology, and earth science developed in AHS 491.
Prereq.: AHS 491 2 Cr. Fall | Spring

Student Learning Outcomes

1. Synthesize results and formulate conclusions for capstone project 2. Demonstrate effective written communication skills 3. Demonstrate effective oral presentation skills 4. Critically evaluate oral presentations

Biological Sciences (BIOL)

BIOL 101 Environment and Society

Causes and possible solutions to major local, national and global environmental problems. Soil, water, air, forests, energy, wildlife, and related topics.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES | GOAL AREA 10: ENVIRONMENTAL ISSUES

BIOL 102 The Living World

Plants, animals, and microorganisms of North America. Interactions of organisms with their environment. Minnesota habitats and their inhabitants.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES | GOAL AREA 10: ENVIRONMENTAL ISSUES

BIOL 103 Human Biology

Organization and general functioning of the human body. Reproduction; heredity; social implications of biological principles.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

BIOL 104 Human Disorders (Topical)

Biological aspects of human disorders. Heredity, immunity, infection, aging, stress, life styles, and chemical agents. Offered as different topics: Human Genetics and Birth Defect, Human Disease. General education credit may be received for only one topic.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

BIOL 106 Cultural Botany (Diversity)

Contributions of African, Latin American, Asian, and American Indian cultures to agriculture and the uses of plants/plant products in the United States. Food, fiber, and medicinal plants used by American Indians. Contributions of women and people of color to plant sciences.
3 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

BIOL 107 Biology of Women (Diversity)

Biology of human female: functional anatomy, physiology, sexuality, reproduction, pregnancy and aging. Examination of women's health related to these topics.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

BIOL 151 Cell Function and Inheritance

The cellular and genetic basis of life. Current laboratory methods.
Prereq.: Eligibility for MATH 112, MATH 193 or higher 4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Design and perform laboratory experiments on biological specimens and communicate results in written and oral form.
2. Identify and define the tenants of Biological Evolution.
3. Identify and define the ultrastructure of prokaryotic and eukaryotic cells with illustrations and vocabulary including the structure of two key organelles, mitochondria and chloroplasts.
4. Identify the chemical building blocks of life, the chemical reactions of Biology and the Biochemical Language of Life and decode the universal Biochemical Language of Life using computers.
5. Discern the regulation of the universal language of life in molecular terms and observe it in a biotechnology laboratory.

BIOL 152 Organismal Diversity

Organisms at the cellular, organismal, and ecological levels. Integrate knowledge, terminology, and concepts from all fields of biology to gain an appreciation of the origin of life and how species diversity arose.
Prereq.: Eligibility for MATH 112, MATH 193 or higher 4 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES | GOAL AREA 10: ENVIRONMENTAL ISSUES

BIOL 202 Human Anatomy and Physiology I

Structure and metabolic activity of organ systems including muscular, skeletal, nervous, and integumentary. Not applicable to major programs in BIOL including Biomedical Science.
Prereq.: C or higher in BIOL 103 or BIOL 151 or a passing grade on the 202 placement exam. 4 Cr. Fall

Student Learning Outcomes

1. Compare and contrast positive and negative feedbacks in terms of the relationship between stimulus and response with examples from each system.
2. Describe the location of body structures, using appropriate terminology and the major functions of each organ system.
3. Explain how different cells, tissues, organs, and organ systems relate to one another to maintain homeostasis.
4. Predict factors or situations affecting various organ systems that could disrupt homeostasis and the types of problems that would occur in the body if various organ systems could not maintain homeostasis and allowed regulated variables (body conditions) to move away from normal.

BIOL 204 Human Anatomy and Physiology II

Structure and metabolic activity of organ systems including circulatory, respiratory, digestive, urinary, endocrine, and reproductive. Not applicable to major programs in BIOL including Biomedical Science.
Prereq.: BIOL 202 4 Cr. Spring

Student Learning Outcomes

1. Compare and contrast positive and negative feedback in terms of the relationship between

stimulus and response with examples from each system.
2. Describe the location of body structures, using appropriate terminology and the major functions of each organ system.
3. Explain how different cells, tissues, organs, and organ systems relate to one another to maintain homeostasis.
4. Predict factors or situations affecting various organ systems that could disrupt homeostasis and the types of problems that would occur in the body if various organ systems could not maintain homeostasis and allowed regulated variables (body conditions) to move away from normal.

BIOL 206 Introductory Microbiology

Survey of microorganisms with emphasis on general principles in allied health and medicine. (May not be taken for credit if credit has been received for BIOL 362).
Prereq.: One of BIOL 151, BIOL 202, BIOL 204, and one of CHEM 151, CHEM 160, or CHEM 210 4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Discuss the contributions of microbes to the environment, the characteristics of the major groups, their interactions with human, and the role of microbes in food production and other commerce.
2. Explain the use of microscopy to visualize and characterize microbes, staining procedures, how differential stains help define organisms, and the appropriate use of the light microscope.
3. Describe the major anatomical features of bacteria and explain the importance of various bacterial structures in enhancing the interaction of these organisms with other living organisms including humans. When appropriate, describe how structures contribute to disease production in humans.
4. Explain how bacteria adapt to their environment, the nutrients necessary for their survival, how they survive in different oxygen tensions, how energy is produced, the types of respiration, and how biochemical tests can be used to identify bacteria species.
5. Explain how gene transfer can occur in asexual bacteria, how drug resistance may arise, how bacterial metabolism is linked to genetics, and how we can determine if a compound is a mutagen using bacteria.
6. Using appropriate terminology, describe various levels of control for microbes, the chemical and physical agents of control, and the limitations of various control methods.
7. Explain the difference between archae and eubacteria, how bacterial species are defined, the methods used to isolate and characterize different bacterial species, and the foundation of bacterial nomenclature.
8. Explain the taxonomic differences in these three groups, the potential economic importance of algae, the structure and function of lichens, and the importance of life cycles in understanding the disease process and control and protozoans.
9. Describe how viruses are classified, how the host reproduces these agents, the role of viruses in cancer, and the changes that occur in host cells and tissues due to viral infections.
10. Explain the importance of epidemiology in controlling infectious disease, the mechanisms by which microbes are transmitted between hosts or from the environment, the difference in insects as mechanical carriers or biological vectors of disease.

BIOL 222 Careers in Natural Resources

Career opportunities and preparation for professional employment.
2 Cr. Fall

Student Learning Outcomes

1. Demonstrate the ability to collect, statistically analyze, interpret, and display data.
2. Demonstrate professional behavior and practical skills including safety procedures for field and laboratory equipment.
3. Demonstrate an understanding of the effects of natural events and human activities on ecosystems.
4. Associate the history of conservation with current missions of natural resource agencies.
5. Assess their university program of coursework as related to natural resource careers and identify and compare the diversity of employment opportunities.
6. Perform mock internet job/graduate school searches and will prepare and evaluate cover letters and resumes.

BIOL 262 Genetics

Transmission and molecular genetics; application to medical genetics.
Prereq.: BIOL 151, CHEM 210 4 Cr. Fall | Spring

Student Learning Outcomes

1. Explain how genes are passed from parent to offspring.

2. Predict the probability of specific outcomes occurring, given a specific genetic cross.
3. Describe the structure and organization of genes and chromosomes.
4. Explain how DNA, RNA, and proteins produce traits in organisms.
5. Differentiate between several mechanism by which cells and organisms regulate gene expression in response to environmental and physiologic changes.
6. Analyze data resulting from given genetic crosses (pedigrees and specific crosses) and propose one or more genetic mechanisms that could produce that outcome.
7. Identify what type of genetic changes result in which type of human syndromes/conditions.
8. Discuss the importance of polyploidy in plants as it pertains to agriculture.
9. Propose how a specific type of change to a chromosome will affect an organism.
10. Identify chemical and physical agents that mutate DNA and explain their mechanism(s) of action.

BIOL 266 Medical Terminology

Interpretation and building a vocabulary of medical terms from Latin and Greek roots. Writing and case studies.
2 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and define word roots, prefixes, suffixes, and combining forms of medical terms.
2. Build and break down medical terms based upon the word building strategy.
3. Discuss elementary anatomy & physiology, pathology, and pharmacology of body systems.
4. Spell medical terms correctly.
5. Pronounce medical terms correctly.
6. Use the correct term and grammatical form based upon the context.
7. Categorize medical terms as surgical, diagnostic, or therapeutic procedures.

BIOL 290 Selected Topics in Biology

Topics announced in schedule of classes. May be repeated to a maximum of 12 credits.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Analyze a specific problem in biology using the scientific method.
2. Describe and apply key theories in biology.
3. Communicate experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

BIOL 306 Plant Biology

Systematics, ecology, and structure and function of photosynthetic organisms. Significance of plastid-bearing organisms relative to their interactions in biological systems.
Prereq.: BIOL 151, BIOL 152 4 Cr. Fall | Spring

Student Learning Outcomes

1. Examine key concepts and apply acquired knowledge to the complexity of plant biology.
2. Generate a researchable question and develop a protocol to address it.
3. Collect, statistically analyze, interpret and display data.
4. Demonstrate practical skills including safety procedures for field and laboratory equipment.
5. Select and critically use resources (literature, databases, journals, etc.) to evaluate current and emerging knowledge in the field.
6. Communicate both orally and in writing.
7. Respond to hypothetical or real opportunities for employment, advanced study or other opportunities (e.g., summer research) in a manner that showcases the application of their academic background.

BIOL 308 General Zoology

Major animal phyla; structure and function of body systems, diversity.
Prereq.: BIOL 151, BIOL 152 4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Classify animal species and reconstruct the history of animal life on the earth.
2. Analyze the historical roots, assumptions, and empirical methodology of the science of Zoology.
3. Differentiate between proximate and ultimate explanations of origins of animal species, and apply these principles to specific examples.
4. Demonstrate technical skills such as the use of microscopes, dissection techniques, and field study methods of observing animal behavior.
5. Collect, present, and interpret data.
6. Analyze the relationship between form and function and apply principles to examples from the animal world.

BIOL 312 General Ecology

Interactions between organisms and their organic and inorganic environment. Biomes, climate, populations, communities, biotic interactions, energy and nutrients, landscape and spatial ecology, biodiversity patterns.
Prereq.: BIOL 306 or BIOL 308; CHEM 210 4 Cr. Fall | Spring

Student Learning Outcomes

1. Apply the scientific method to experimental problems in ecology.
2. Calculate measures of population growth and biodiversity indices.
3. Summarize principles of behavioral ecology, population ecology, community ecology and ecosystem ecology.
4. Generate experimental hypotheses and carry out experiments, including correct data analysis and conclusions.
5. Compare characteristics of aquatic and terrestrial environments, and explain the abiotic principles which determine those characteristics.
6. Analyze the adaptations and responses living organisms have to their environment.

BIOL 313 Communities and Ecosystems

Biodiversity patterns and metrics, species interactions, community assembly and structure, trophic interactions, food webs, succession, disturbance, stability, nutrient cycling, productivity, energy flow, ecosystem function, decomposition, climate change.
Prereq.: BIOL 312 3 Cr. DEMAND

Student Learning Outcomes

1. Calculate and interpret results of quantitative biodiversity metrics.
2. Calculate and interpret community similarity and dissimilarity measures.
3. Synthesize current scientific understanding of global biodiversity patterns.
4. Describe community assembly mechanisms, and apply concepts to examples from the literature.
5. Manipulate and interpret competition and predation models.
6. Differentiate among competing mechanistic explanations for regulation of energy flow through communities.
7. Describe role of decomposing organisms and soil fauna in energy and nutrient flow in terrestrial communities.
8. Apply ecosystem function concepts to arguments for biodiversity conservation.
9. Evaluate roles of natural nutrient cycles and anthropogenic factors in global climate change.
10. Employ mutualism and symbiosis theory to explain co-evolution of species groups.

BIOL 314 Mammalogy

Biology of mammals: phylogeny, classification, evolutionary origins, morphology, ecology, behavior, population dynamics, life histories, adaptations.
Prereq.: BIOL 308 4 Cr. DEMAND

Student Learning Outcomes

1. Identify characteristics of mammals which differentiate them from other life forms.
2. Interpret evolutionary relationships among groups of mammal species.
3. Compare and contrast morphological, physiological and behavioral characteristics of mammals and their functions.
4. Apply the scientific method to field and laboratory investigations of mammalian biology.

BIOL 316 Entomology

Biology of insects and related groups of animals: phylogeny, classification, evolutionary origins, morphology, ecology, behavior, population dynamics, life histories, adaptations, economic impacts.
Prereq.: BIOL 308 4 Cr. DEMAND

Student Learning Outcomes

1. Identify characteristics of insects which differentiate them from other life forms.
2. Interpret evolutionary relationships among groups of insect and other arthropod species.
3. Compare and contrast morphological, physiological and behavioral characteristics of insects and their functions.
4. Perform library research related to entomology and generate appropriate scientific communications (written and oral).
5. Identify insects and related arthropods in the field and laboratory.

BIOL 318 Comparative Vertebrate Anatomy

Development and structure of representative vertebrates. Dissection of selected animals.
Prereq.: BIOL 151, BIOL 152 3 Cr. Spring

Student Learning Outcomes

1. Analyze and integrate vertebrate diversity within the context of phenotypic selection.

2. Formulate hypotheses based on structure/function relationships among vertebrate systems.
3. Synthesize cohesive phylogenetic constructs in the context of vertebrate evolution.
4. Compose critical reviews of current literature in the anatomical sciences.

BIOL 322 Ichthyology

Biology of fishes: phylogeny, classification, evolutionary origins, morphology, ecology, behavior, population dynamics, life histories, adaptations.
Prereq.: BIOL 308 4 Cr. Spring

Student Learning Outcomes

1. Identify characteristics of fishes which differentiate them from other life forms.
2. Interpret evolutionary relationships among groups of fish species.
3. Compare and contrast morphological, physiological and behavioral characteristics of fishes and their functions.
4. Perform library research related to ichthyology and generate appropriate scientific communications (written and oral).
5. Identify fishes of Minnesota in the field and laboratory.

BIOL 323 Field Ornithology

Field and laboratory identification of birds by sight and song, basic anatomy, survey methodology, and capture, handling, and marking techniques.
Prereq.: BIOL 308 4 Cr. Summer

Student Learning Outcomes

1. Demonstrate proficiency in bird identification via sight and song.
2. Apply laboratory-gained knowledge of bird anatomy to aging, sexing of wild-captured birds.
3. Design and operate a bird banding station.
4. Analyze bird capture and bird monitoring data.
5. Demonstrate proficiency in bird handling techniques.
6. Evaluate a national marsh bird monitoring program.
7. Demonstrate the ability to collect, statistically analyze, interpret and display data from the Biological Sciences Assessment plan.
8. Demonstrate practical skills including safety procedures for field and laboratory equipment from the Biological Sciences Assessment plan.
9. Demonstrate an understanding of the effects of natural events and human activities on ecosystems from the Biological Sciences Assessment plan.

BIOL 324 Ornithology

Biology of birds: phylogeny, classification, evolutionary origins, morphology, ecology, behavior, population dynamics, life histories, adaptations. Field identification.
Prereq.: BIOL 308 4 Cr. DEMAND

Student Learning Outcomes

1. Identify characteristics of birds which differentiate them from other life forms.
2. Compare and contrast morphological, physiological and behavioral characteristics of birds and their functions.
3. Perform library research related to ornothology and generate appropriate scientific communications (written and oral).
4. Identify bird species in the field and laboratory and demonstrate competent use of field sampling techniques.
5. Apply the scientific method to field and laboratory investigations of bird biology.

BIOL 326 Limnology

Lakes and streams in a watershed setting; historical origin, physical and chemical environment, diversity of plants and animals, field and laboratory limnological sampling methods.
Prereq.: BIOL 312 4 Cr. DEMAND

Student Learning Outcomes

1. Analyze physical and chemical properties in freshwater ecosystems and how they influence biological patterns.
2. Synthesize population, community and ecosystem processes in lakes and rivers, and identify how human activities disrupt these processes.
3. Construct and evaluate an invasive species data set using limnological, ecological and statistical principles.

BIOL 339 Statistical Design

Statistical technique selection, design, and interpretation for biology majors.
Coreq.: STAT 239 1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Recognize and generate statistical designs appropriate to a variety of experiments and observational studies.
2. Select statistical techniques appropriate to

selected experimental design.
3. Make appropriate interpretations from statistical applications

BIOL 360 Cell Biology

Major cellular organelles, macromolecular structures and processes at the subcellular/molecular level. Laboratory investigations to enhance skills needed for upper-level biology courses for Biomedical Sciences, Biotechnology, and General Biology.
Prereq.: BIOL 262; MATH 193 or STAT 193 or higher
4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Upon completion of this course, successful students will be able to describe the functional roles of various organelles and subcellular structures.
2. Upon completion of this course, successful students will be able to distinguish various subcellular processes at the molecular level.
3. Upon completion of this course, successful students will be able to explain characteristics and the evolution of eukaryotic cells.
4. Upon completion of this course, successful students will be able to discuss cell membrane activities in terms of transport processes and cell-cell communication.

BIOL 361 Emerging Infectious Diseases

Emerging pathogenic bacteria, viruses and parasites. Epidemiology, food safety, bioterrorism, public health.
Prereq.: BIOL 103 or BIOL 151 or BIOL 152 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Correctly use vocabulary related to epidemiology and public health in writing.
2. Analyze and describe the biological and sociological mechanisms by which new infectious diseases emerge.
3. Summarize current scientific literature on emerging infectious diseases.
4. Examine infectious disease outbreaks and explain the underlying causes.
5. Formulate preventative plans to reduce the impact of future disease outbreaks.

BIOL 362 Microbiology

Survey of microorganisms including viruses and virus-like particles, bacteria, protozoa and fungi with an emphasis on principles important to biologists.
Prereq.: BIOL 360 or all of BIOL 262, BIOL 306, and CHEM 240. 4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Demonstrate the ability to isolate, purify, and work with microorganisms.
2. Differentiate between various types of microorganisms.
3. Describe the structure, chemistry and genetics of a variety of microorganisms.
4. Demonstrate the ability to compare and contrast disease-causing pathogens.

BIOL 364 Histology

Microscopic structure and related functions of mammalian cells, tissues and organs.
Prereq.: BIOL 151 3 Cr. Spring

Student Learning Outcomes

1. Successful students in BIOLOGY 364 (Histology) will be able to: Analyze and integrate the structure/function relationships of cells and tissues within organs.
2. Compare and distinguish cells, tissues, and organs based upon their microstructure.
3. Formulate functional hypotheses based on observed organismal microstructure.

BIOL 366 Human Anatomy

Examination of tissues, organs and systems. Structure/function relationships and clinical correlations. Standard anatomical learning aids, cadaver dissections, and computer programs. (May not be taken for credit if credit has been received for BIOL 204).
Prereq.: BIOL 151 4 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze anatomical development and structure in the framework of evolutionary theory.
2. Integrate function relationships of anatomical structures within an organismal framework.
3. Compare and distinguish functional unites of organization based on their macroscopic structure.
4. Formulate functional hypotheses based on observed organismal structure.

BIOL 367 Introductory Pharmacology

Principles of pharmacology and their relationship to health care. Classification of drugs, basic mechanisms of drug actions and interactions, and calculations for drug administration. For students

interested in health professions.
Prereq.: CHEM 210 3 Cr. Spring

Student Learning Outcomes
1. Employ pharmacodynamic and pharmacokinetic concepts to evaluate drug efficacy and safety.
2. Integrate complex factors such as genomic data, individual variation, cultural perspectives, psychosocial impact, personal health, self-treatment, and substance abuse into a patient-centered view of drug therapy.
3. Associate drug class and target with indication, treatment and side effects, evaluate risk-benefit relationships, and appraise therapeutic approach for drugs that affect a broad spectrum of human physiological systems.

BIOL 368 Introductory Pathophysiology
Lectures and group discussion will be utilized to present concepts of pathophysiology. Will study models of normal physiology and changes that occur with stress and disease. Designed for students interested in allied health professions such as nursing.
Prereq.: BIOL 202, BIOL 204, CHEM 141 3 Cr. Fall

Student Learning Outcomes
1. Distinguish between normal and abnormal function of most human physiological systems (central and peripheral nervous, cardiovascular, immune, gastrointestinal, renal, endocrine, reproductive, respiratory, skeletomuscular).
2. Examine the disease process, define pathogenesis, and classify possible diagnostic techniques.
3. Examine the body's response to injury, differentiate acute and chronic inflammation and classify healing potential based on a tissue's ability to regenerate.
4. Differentiate between normal and abnormal tissue growth (neoplasia).

BIOL 390 Selected Topics in Biology
Topics announced in schedule of classes. May be repeated to a maximum of 12 credits.
Coreq.: 1-4 Cr. DEMAND

Student Learning Outcomes
1. Analyze a specific problem in biology using the scientific method.
2. Describe and apply key theories in biology.
3. Communicate experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

BIOL 414 Paleobiology
Ancient life from the Precambrian microorganism through Cenozoic macrofossils. Trace fossils, ancient animals/plants, extinction.
Prereq.: BIOL 306 or BIOL 308 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate scientific literacy by defining and explaining the major steps in the scientific method of investigation; specifically the difference between empirical data, interpretation, testable hypothesis, theory, paradigm, speculation, and pseudo-science.
2. Apply general math skills such as unit conversion, ratios, and percentages to solving simple rate problems; evaluate data, produce, and interpret tables and graphs; apply the metric system of measurement.
3. Demonstrate an understanding of the geologic time scale and methods of measuring geologic time.
4. Identify and classify the common earth materials, such as most common minerals, rocks, and fossils in the lab and in the field and their basic relationship to common natural resources.

BIOL 418 Wetland Plant Communities
The structure, characteristics, indicator plants, wildlife uses, management, and restoration of wetland and aquatic plant communities.
Prereq.: BIOL 151, BIOL 152 2 Cr. Fall

Student Learning Outcomes
1. Identify the major wetland plant communities of central Minnesota.
2. Distinguish morphological adaptations of plants to aquatic environment.
3. Use indicator plants to evaluate wetlands and identify succesional stages.
4. Practice standard procedures for wetland determination.
5. Discuss recent (printed and electronic) references for wetland uses, management and restoration.

BIOL 420 Plant Taxonomy
Principles and practice of plant taxonomy including modern technological approaches.
Prereq.: BIOL 306 4 Cr. Spring

Student Learning Outcomes

1. Explain the principles of plant taxonomy, including evolutionary trends, patterns of speciation, biogeography, and floral biology.
2. Employ vegetative and reproductive features and terminology useful in the identification and classification of flowering plants.
3. Examine the extent to which a classification system reflects relationships among plants.
4. Analyze relationships between evolutionary mechanisms, evolutionary history, and classification flowering plants.
5. Practice modern technological approaches for establishing evolutionary relationship among taxa.
6. Associate the importance of Systematics to other areas of biology.

BIOL 422 Terrestrial and Aquatic Plant Identification

Field identification and ecological aspects of local terrestrial, wetland, and aquatic vascular plants.
Prereq.: BIOL 306 4 Cr. Summer

Student Learning Outcomes

1. Identify important species of the major terrestrial, aquatic, and wetland plant communities of central Minnesota.
2. Distinguish the major families of vascular plants found in Minnesota and learn their salient features.
3. Use standard technical keys for identifying plants. To gain familiarity with common, simple taxonomic keys, their construction, their limitations. This is a particularly important objective since, if accomplished, enables the student to identify common plants without the aid of an instructor after successfully completing the course.
4. Practice a working knowledge of the vocabulary needed to identify plants.
5. Tell the general morphological aspects of vascular plants most important in their identification, including the nature of the structures.

BIOL 430 Phycology

The collection, identification, culture, and study of freshwater algae from diverse habitats; primary production, community interactions, life cycles, and lake phytoplankton and stream phytobenthos assessment.
Prereq.: BIOL 306, BIOL 312 4 Cr. DEMAND

Student Learning Outcomes

1. Identify characteristics of algae which differentiate them from other life forms.
2. Interpret evolutionary relationships among groups of algal species.
3. Compare and contrast morphological, physiological and genetic characteristics of algae and their functions.
4. Perform library research related to phycology and generate appropriate scientific communications (written and oral).
5. Identify algal species in the field and laboratory and demonstrate collection techniques.

BIOL 434 Freshwater Invertebrate Zoology

Natural history, collection, and classification of local species of freshwater invertebrates, exclusive of planktonic forms and Protozoa.
Prereq.: BIOL 308, BIOL 312 4 Cr. DEMAND

Student Learning Outcomes

1. List the major freshwater invertebrate phyla and classes, and compare evolutionary relationships among these taxonomic groups.
2. Use standard taxonomic manuals to identify common taxa of freshwater invertebrates.
3. Use appropriate collecting and preparation procedures to construct and categorize a collection of local freshwater invertebrates.

BIOL 436 Water Quality

Water quality monitoring, sampling strategies, and data analysis. Biomonitoring, toxicity, eutrophication, acid deposition, and groundwater quality.
Prereq.: BIOL 312 4 Cr. DEMAND

Student Learning Outcomes

1. Identify how standards and criteria are created and used to protect freshwater ecosystems.
2. Apply knowledge of biological and physical water processes to evaluate the health of freshwater habitats.
3. Evaluate the theory and practice of water pollution prevention and treatment.
4. Test the impact of human activities on rivers using biological monitoring techniques.

BIOL 441 Comparative Animal Behavior

Behavior of animals in their natural environments. Comparative analysis across a range of species and topics.
Prereq.: BIOL 312 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate the ability to consume and critique the literature in animal behavior.
2. Demonstrate the ability to construct testable hypothesis and appropriate research designs assessing theoretical explanations of animal behavior.
3. Demonstrate the ability to differentiate proximate and ultimate causation of behavior.
4. Demonstrate the ability to communicate (written and oral) in scientific terms the nuances of evolutionary aspects of animal behavior.
5. Demonstrate the ability to trace the historical antecedents of the study of animal behavior.

BIOL 442 Wildlife Populations

Mathematical modeling of population growth, population sampling techniques, and survival/reproduction. Case studies involve theoretical and empirical investigation of single populations, metapopulations, and sources and sinks.
Prereq.: BIOL 312 4 Cr. DEMAND

Student Learning Outcomes

1. Employ mathematical and computer models to analyze changes in wildlife populations.
2. Evaluate tabular, graphical and written research in population biology and demonstrate correct interpretations of technical literature.
3. Demonstrate population sampling techniques in field exercises or in independent research.
4. Apply the scientific method to problems in population biology.
5. Perform library research related to population biology and generate appropriate scientific communications (written and oral).

BIOL 444 Biology Internship

Full or part-time participation in industry or a government agency. Arrangements must be made before registration. Maximum of 6 credits may be counted toward major requirements, remaining credits to be used in general electives.
Coreq.: 1-16 Cr. Fall | Spring | Summer

BIOL 448 Freshwater Ecology

Aquatic organisms in lakes and streams; lakes and streams as functional units of watersheds; interactions of aquatic organisms with their environment and each other.
4 Cr. DEMAND

Student Learning Outcomes

1. Use appropriate oral communication skills and techniques to explain a specific freshwater ecology topic.
2. Create a review paper that discusses and evaluates a major question in freshwater ecology.
3. Apply freshwater ecological theory to solve an applied problem + cultural eutrophication of a lake.

BIOL 449 Field Studies in Biology (Topical)

Field trips to study the flora, fauna, and ecology of native habitats such as Isle Royal and the Florida Keys. Arranged instructional sessions may be required before or after the trip. Travel expenses required. Permission of instructor. May be repeated, with approval of adviser to a max. of 9 credits.
Coreq.: 1-3 Cr. DEMAND

BIOL 450 Readings in Biology (Topical)

Directed readings on selected topics. May be repeated to a maximum of 6 credits toward a degree program as elective credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

BIOL 451 Research

Independent laboratory or field research. May be repeated to a maximum of 6 credits toward a degree program as elective credits.
Coreq.: 1-4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Apply the scientific method to problems in biology.
2. Design experiments, plan scientific procedures.
3. Carry out procedures planned in Learning Outcome 2.
4. Conduct appropriate data analysis.
5. Make appropriate conclusions based on experimental results.
6. Communicate results and conclusions effectively both verbally and in writing.

BIOL 453 Seminar in Biology (Topical)

Presentations and discussions by students under guidance of a faculty member. May be repeated to a max. of 4 credits.
Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze a specific problem in biology using the scientific method.
2. Describe and apply key theories in biology.
3. Communicate experimental findings, analyses,

and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

BIOL 455 Practicum (Topical)

Supervised experience in selected areas such as laboratory management, greenhouse management, animal room management, aquarium management, Museum/herbarium curator, undergraduate learning assistants. May be repeated to a maximum of 3 credits. Departmental approval required for enrollment.
Coreq.: 0-3 Cr. Fall | Spring | Summer

BIOL 456 Biological Evolution

History, evidence, and processes of biological evolution (microevolution, speciation, and macroevolution). Theories on the origin of life.
Prereq.: BIOL 262 3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze and interpret phylogenies and other representations of relationships among life forms.
2. Use mathematical models to illustrate principles of evolutionary change in population and genetic contexts.
3. Demonstrate effective scientific communication, both orally and in writing.
4. Compare and contrast mechanisms of evolution, how they function and illustrate examples.
5. Identify, compare and criticize species concepts.
6. Describe key historical figures and developments in understanding of biological evolution.

BIOL 457 History and Philosophy of Biology

Origins of science and history of biological discoveries. The development of modern biology. Philosophical bases for the biological sciences.
3 Cr. Spring

Student Learning Outcomes

1. Assemble critical junctures of paradigm shifts in the biological sciences.
2. Synthesize classical approaches to knowledge with modern scientific theory.
3. Compose and write critical reviews of current literature in evolutionary theory.
4. Formulate cohesive approaches to current questions in the life sciences.

BIOL 460 General Parasitology

Parasite ecology and classification. The relationship of these organisms to diseases of humans and animals.
Prereq.: BIOL 151, BIOL 152 4 Cr. Fall

Student Learning Outcomes

1. Be able to describe and classify and demonstrate types and modes of parasitic existence.
2. Demonstration of understanding of classification in taxonomy and systematics of parasitology in the tree of life.
3. Be able to describe and demonstrate understanding of evolution and natural selection through parasitology.
4. Be able to connect, describe, and demonstrate how the disciplines of cell biology, immunology, microbiology, ecology and evolution converge in parasitology.
5. Be able to identify and differentiate prokaryotic, protozoan and metazoan parasites visually, microscopically, and in life cycle analysis.

BIOL 461 Conservation and Management of Animals

Biology, ecology, population structures, sampling methods, management techniques, life histories and demographic analysis, ecosystems, and conservation of animals.
Prereq.: BIOL 312 4 Cr. Fall

Student Learning Outcomes

1. Describe the ecology and basic biology of the major groups of animals.
2. Assess the major groups of commercially important animals found worldwide, invasive species, and common native and invasive animals of Minnesota.
3. Specify the importance of biodiversity and mechanisms to conserve biodiversity 4. Assess the causes and consequences of threats to biodiversity
5. Determine conservation strategies to protect animal biodiversity in terrestrial and aquatic habitats.
6. Summarize the causes of variation in population genetics and how population genetics informs our understanding of the history of animal populations through time.
7. Construct population demographic assessments of animals, including sampling techniques and methods for estimating population size.
8. Produce management strategies for sustaining populations of threatened, endangered, and commercially important terrestrial and aquatic

animals.
9. Develop a management plan for an invasive animal species.
10. Evaluate the data and conclusions drawn from primary literature, particularly in relation to the conservation and management of animals.

BIOL 462 Medical Microbiology

Taxonomy, morphology, culture biochemical activities of pathogenic microorganisms and their pathogenic mechanisms and the corresponding host response.
Prereq.: BIOL 362 4 Cr. Spring

Student Learning Outcomes

1. Describe multiple pathogenic mechanisms and demonstrate the ability to compare and contrast these mechanisms.
2. Demonstrate the technical ability to manipulate safety pathogenic microorganisms.
3. Identify microorganisms on the basis of taxonomy, morphology and biochemistry.

BIOL 464 Hematology

Blood cell formation and function, morphology and function. Etiology and lab diagnosis of common hematologic diseases. Mechanisms of hemostasis. Clinical procedures.
Prereq.: BIOL 151 3 Cr. Fall

Student Learning Outcomes

1. Distinguish white, red blood cells' and platelets' morphology.
2. Assess the roles of healthy white, red blood cells and platelets.
3. Compare and differentiate diseases of white and red blood cells.
4. Evaluate and grade a normal blood smear prepared by them.

BIOL 465 Principles of Phylogenetics

Taxonomy, Linnaean system and codes of nomenclature, homology and character analysis, history of systematics, systematic principles, optimality criteria, divergence-time estimation, character evolution, biogeography, macroevolution.
Prereq.: BIOL 456 3 Cr. DEMAND

Student Learning Outcomes

1. Summarize the history of taxonomic classifications and the rules of nomenclature
2. Demonstrate phylogenetic approaches to classification 3. Apply the principle of homology to estimating relationships among organisms
4. Examine the history of systematics and fundamental principles of phylogenetic theory
5. Assess the differences among optimality criteria (e.g., Parsimony, Likelihood, Bayesian) for identifying optimal hypotheses of evolutionary relationships.
6. Demonstrate methods of phylogenetic reconstruction and divergence-time estimation.
7. Apply principles of biogeography and applications of phylogenetics to studying historical distributions of organisms.
8. Apply methods and applications of phylogenetics, including character evolution.
9. Evaluate the data and conclusions drawn from primary literature, particularly in relation to taxonomy and systematics.

BIOL 466 Microscopy and Image Analysis

Principles of light microscopy, image acquisition, and analysis including computer measurement and enhancement of images.
Prereq.: BIOL 151 2 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and understand the principle components of light, scanning electron, and atomic force microscopes.
2. Understand the principles of optics and physics that apply to understand in outline, the principles of optics that apply to light microscopes.
3. Demonstrate the set up and use a light microscope.
4. Construct and compose a photomicrographic plate using images from various microscope systems.

BIOL 468 Advanced Animal Cell Culture Techniques

Advanced topics in techniques and theory of culture of animal cells in vitro. Applications to biomedical research and biotechnology. Establish, grow, maintain, preserve, and utilize animal cells. Completion of this course with a grade of "C" or better fulfills the upper division writing requirement for the BES Biology, General Biology, Biomedical Sciences, and Biotechnology progams.
Prereq.: BIOL 362 4 Cr. Spring

Student Learning Outcomes

1. Access and utilize primary scientific literature in the field of cell culture.
2. Identify the utility of common cell culture techniques in research and biotechnology fields.
3. Perform common cell culture techniques such as

passaging cells, transfecting cells, and differentiating cells.
4. Write scientifically and present lab results in the format of the primary scientific literature in this field.
5. Design and perform an experiment to test an hypothesis using animal cell culture.
6. Evaluate the effectiveness of different cell culture methods.

BIOL 472 Virology

Morphology, virus-host relationships, diseases, prions and viroids.
Prereq.: BIOL 362 3 Cr. Spring

Student Learning Outcomes

1. Classify viruses via several different methods.
2. Describe the components and makeup of viruses.
3. Differentiate between different viral genomes.
4. Describe the pathogenesis of many viruses.
5. Report several methods to combat viruses.
6. Explain the molecular mechanisms that regulate viruses.

BIOL 474 Neurobiology

Molecular, cellular and developmental aspects of the nervous system. Sensory, motor, and central systems. Mechanisms of neuropathology.
Prereq.: BIOL 360 3 Cr. DEMAND

Student Learning Outcomes

1. Comprehend and synthesize the molecular, cellular, and organismal components of the nervous system.
2. Determine how the formation of neuronal circuits allows an organism to gather information from the environment and execute appropriate responses to that input.
3. Read and evaluate primary research articles in neurobiology.
4. Apply knowledge of normal neurobiology to postulate mechanisms for neuropathology.

BIOL 475 Systematic Bioinformatics

Biological collections, collection stewardship, biological collections databases, networks, cybertaxonomy, taxonomic concepts, ontology, specimen digitization, georeferenced specimens, predictive ecogeographic modeling, genomic databases, genomic partitioning strategies, models of molecular evolution, phylogenomics.
Prereq.: BIOL 456 3 Cr. DEMAND

Student Learning Outcomes

1. Summarize the history of biological collections and their importance to ecological and evolutionary biology 2. Demonstrate good collection stewardship 3. Analyze the role of cybertaxonomy in modern taxonomy 4. Evaluate methods of specimen digitization and applications of this data for taxonomic, phylogenetic, and evolutionary studies 5. Analyze the importance of georeferencing biological collections and how to access databases with georeferenced information 6. Apply ecogeographic predictive modeling for ecological and evolutionary studies.
7. Examine genomic databases associated with biological collections 8. Summarize genomic partitioning strategies, models of molecular evolution, and fundamentals of phylogenomics.
9. Apply methods and applications of phylogenomic studies 10. Evaluate the data and conclusions drawn from primary literature, particularly in relation to cybertaxonomy, phylogenomics, and bioinformatics.

BIOL 476 Developmental Biology

The development of multi-cellular organisms at the molecular, cellular, and organismal levels.
Prereq.: BIOL 360 4 Cr. Spring

Student Learning Outcomes

1. Successful students in BIOLOGY 476 will be able to integrate topics from molecular biology, cell biology, genetics, and morphology to synthesize a discussion of a specific developmental event.
2. Construct a framework that outlines a specific developmental event in terms of genetic outputs (including epigenetic effects) and environmental inputs, noting how developmental events fit into the larger context of evolution.
3. Analyze and evaluate ethical concerns and assertions related to developing cells and organisms.

BIOL 477 Advanced Anatomy: Human Dissection

Detailed regional dissection. Functional and clinical aspects of dissections. Technique and preparation of prosections for introductory courses. By permission only.
3 Cr. Summer

Student Learning Outcomes

1. Plan anatomical dissection based on specific pedagogical needs.
2. Produce visual representation of macroscopic structure within the context of anatomical systems.

3. Integrate anatomical preparations across functional systems.

BIOL 478 Human Physiology

Physiological processes at the molecular, cellular, and organismal levels.
Prereq.: BIOL 360, BIOL 366 4 Cr. Fall

Student Learning Outcomes

1. Describe the mechanisms of various physiological processes that underlie the function of the human body as a whole.
2. Design and execute laboratory experiments in human physiology, and interpret data obtained.
3. Write and peer-review standard scientific reports.
4. Read, interpret and critique journal papers in the area of mammalian physiology.
5. Locate relevant and reputable information to research current physiological topics.

BIOL 480 Human Endocrinology and Reproduction

Principles of endocrinology at the molecular, cellular, and organismal level and how endocrine factors regulate the reproductive physiology and behavior of humans.
Prereq.: BIOL 360 3 Cr. Spring

BIOL 482 Advanced Protein Techniques

The theory and application of instrumentation in monitoring, quantifying, and isolating proteins. An individual protein purfication project will be required.
Prereq.: BIOL 264, BIOL 360, CHEM 271, CHEM 311 4 Cr. Fall | Spring

Student Learning Outcomes

1. Access and utilize primary scientific literature regarding protein purification.
2. Identify the utility of specific protein techniques and modify protein techniques to fit their needs, and available supplies and instrumentation.
3. Design and carry out an enzyme purification protocol.
4. Present lab results in the format of the primary scientific literature in this field.

BIOL 483 Histological Techniques

Theoretical and applied aspects of processing, staining, and evaluating tissues through microscopic study.
Prereq.: BIOL 364 or permission of instructor. 3 Cr. Summer

Student Learning Outcomes

1. Evaluate the theoretical basis of tissue fixation and demonstrate proficiency using tissues provided.
2. Recommend techniques for sectioning of tissues and demonstrate proficiency of ranking paraffin embedded tissue.
3. Compare the theoretical basis of staining of tissues and demonstrate proficiency in evaluating the quality of stained sections.
4. Distinguish methods for evaluating normal and abnormal tissue and use scoring rubrics to evaluate tissue types and functional state.
5. Excise, dehydrate, embedd, section and stain histological sections for medical and research evaluation.
6. Design trouble-shooting procedures for fixation, staining, and sectioning of tissues.

BIOL 484 Advanced DNA Techniques

Theory, techniques, and instrumentation of genetic engineering and gene analysis.
Prereq.: BIOL 362, CHEM 480 4 Cr. Spring

Student Learning Outcomes

1. Demonstrate understanding of comparative genomics and bioinformatics by completion of annotation of raw genomic information.
2. Demonstrate understanding of the role of scientific literature in genomics and the study of DNA by application of literature searches to research projects.
3. Present coursework in a poster presentation format.
4. Demonstrate understanding of how genes work by designing and performing a genetic engineering experiment.

BIOL 486 Immunology

Humoral and cell-mediated immune responses. Lymphoid tissues, initiation, and regulation of responses, mechanisms of immunopathologies.
Prereq.: BIOL 360 4 Cr. Fall | Spring

Student Learning Outcomes

1. Upon completion of this course, successful students will be able to discuss the functional roles of organs and tissues of the immune system.
2. Upon completion of this course, successful students will be able to distinguish various immune cell functions and their roles in a normal immune response.
3. Upon completion of this course, successful students will be able to explain the roles of the

innate and adaptive immune response, and their role in normal and disease states.
4. Upon completion of this course, successful students will be able to analyze and critically appraise their own data and data from primary published research articles.

BIOL 490 Selected Topics in Biology

Topics announced in Schedule of classes. May be repeated to a maximum of 12 credits.
Coreq.: 1-4 Cr. DEMAND

Student Learning Outcomes

1. Analyze a specific problem in biology using the scientific method.
2. Describe and apply key theories in biology.
3. Communicate experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

BIOL 491 Invasive Plant Species Management

Characteristics of invasive species, vectors of introduction and spread, ecological and economic consequences, regional invasive species of concern, management, control and eradication programs, invasions and global climate change
Prereq.: BIOL 262, BIOL 306 Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Identify genetic and physiological characteristics of invasive species 2. Analyze vectors of introduction and spread of invasive species 3. Assess ecological and economic consequences of invasions 4. Identify regional species of concern 5. Evaluate management, control and eradication techniques
6. Analyze role of invasives in the context of global climate change

Business Law (BLAW)

BLAW 230 Consumer and Personal Law

The law as it affects consumers, employees, and members of society.
3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

BLAW 235 The Legal, Ethical, and Global Environment of Business

Legal, ethical, environmental, political, and global issues affecting business. Governmental regulations, employment relationships, contracts, product liability, consumer protection, and business forms.
3 Cr. Fall | Spring | Summer GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

Student Learning Outcomes

1. Apply the court system to business disputes and compare and contrast conflict resolution alternatives.
2. Identify and explain means of business influence on political and governmental processes.
3. Describe and apply the constitutional rights of free speech and due process to business settings.
4. Identify, distinguish and apply legal principles to business situations in the areas of contracts, torts, consumer and employee rights, and employment relationships.
5. Identify ethical dilemmas and stakeholders and evaluate the consequences of ethical decisions in business situations.
6. Recognize and respond to the global and culturally diverse context in which business and business law function.
7. Independently and collaboratively evaluate and defend alternative outcomes in legal case scenarios.
8. Communicate legal and/or ethical principles and interpretive analyses orally or in writing.

BLAW 433 Marketing and the Law

Legal regulatory, and ethical aspects of marketing activities including product development, promotion pricing and distribution.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Explain the laws and regulations that affect marketing activities and decision making.
2. Apply ethical principles in a business context and appraise the value of incorporating these principles into decision making.
3. Develop and manage proactive and reactive strategies in response to the legal environment.

BLAW 434 Real Estate Law

Principles of law affecting ownership of real estate interests, the transfer of real property interests, and land use and development.
Prereq.: FIRE 378 3 Cr. Fall

Student Learning Outcomes
1. Explain the laws that impact real estate activities; including methods of ownership, land use, and landlord tenant.
2. Apply real estate law to business and personal situations.
3. Defend alternative outcomes of real estate disputes from both a legal and ethical perspective.

BLAW 435 Technology and the Law
The legal, regulatory, and ethical aspects of managing technology and intellectual property including patents, trademarks, trade secrets, and copyrights.
3 Cr. DEMAND

Student Learning Outcomes
1. Identify the fundamental legal and ethical issues pertinent to technology management.
2. Describe and apply proactive and reactive strategies in response to the legal environment concerning technology.

BLAW 436 Commerical and Financial Law
Legal principles of commercial and financial transactions, including contracts, sales, commercial paper, property, secured transactions, creditor rights, bankruptcy and securities regulation.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Explain the laws relating to business formation, and commercial and financial transactions.
2. Apply commercial and securities laws to business situations in a legal and ethical manner.
3. Develop and manage legal strategies to govern a business, to negotiate commercial matters, and to balance legal business duties under contract, securities, regulatory, criminal and tort laws.

BLAW 437 International Business Law
The legal, regulatory, and ethical aspects of international trade including cultural, political, and linguistic influence on the international legal environment.
3 Cr. DEMAND

Student Learning Outcomes
1. Explain the legal, regulatory, and ethical aspects of international trade including historical, cultural, political, and linguistic influence on the international legal environment.
2. Describe and apply international laws or legal issues related to treaties, contracts, environmental and employment.
3. Defend alternative outcomes in international legal disputes from a legal and ethical perspective.

BLAW 438 Employment Law
The legal, regulatory, and ethical aspects of human resources management including employment discrimination, harassment, workers compensation, and terms and conditions of employment.
3 Cr. DEMAND

Student Learning Outcomes
1. Identify the fundamental legal and ethical issues pertinent to management of employees.
2. Describe and apply proactive and reactive strategies in response to the legal environment concerning employment.

British Studies (BRIT)

BRIT 101 Introduction to the British Cultural Experience
Prepares students for living, studying and traveling in Britain.
Coreq.: BRIT 201 1 Cr. Fall | Spring | Summer GOAL AREA 8: GLOBAL PERSPECTIVES

BRIT 201 Reflections on the British Cultural Experience
Observations and reflections on living, studying and traveling in Britain.
Coreq.: BRIT 101 2 Cr. Fall | Spring | Summer GOAL AREA 8: GLOBAL PERSPECTIVES

BRIT 250 Contemporary Britain
How life in Britain is shaped by public and private institutions. Constitutional politics, provision of education and health care, employment, the media, religion, consumer culture, and sport as elements structuring life in Britain. Debates concerning nationalism, regionalism, race, immigration, class, gender, and age.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

Chemistry and Biochemistry (CHEM)

CHEM 101 Understanding Chemistry
Introduction to basic concepts of chemistry. Students will be taught critical thinking skills resulting in informed scientific analysis of environmental and societal problems. Specific topics

and emphasis for each section selected by instructor. Credit will not be given to students who have previously taken a chemistry course above number 210 and received a passing grade.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

CHEM 105 Chemistry and the Environment

Basic chemistry concepts in the context of the environment. Global warming; ozone depletion; air, water and soil pollution.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES | GOAL AREA 10: ENVIRONMENTAL ISSUES

CHEM 110 Essential Skills for Chemistry

Basic chemistry concepts and elementary mathematical skills necessary for success in CHEM 210. Required for students who do not score high enough on the chemistry placement exam for placement into 210 but wish to enroll in 210. Course meets three times per week for the first five weeks of the semester.
Prereq.: Current registration in CHEM 210 1 Cr. Fall | Spring

Student Learning Outcomes

1. Develop problem-solving strategies for chemistry.
2. Utilize dimensional analysis in problems such as unit conversion and stoichiometry.
3. Use the periodic table as a tool to understand chemical properties, structure and reactivity.
4. Apply the mole concept to stoichiometry and solution chemistry.

CHEM 151 General, Organic, and Biological Chemistry

Introductory chemistry for allied health sciences students with application to life systems.
Prereq.: MATH 070 or MATH 072, MATH 112, MATH 113, MATH 115, MATH 193, MATH 196. 5 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

CHEM 160 Preparatory Chemistry

Introductory course for students who have had no high school chemistry. Preparatory course for 210. Scientific method, measurements, basic chemical principles and chemical calculations. This fulfills the laboratory science liberal education requirement for nonmajors.
Prereq.: Must have ACT math subscore of 20 or higher; or have completed MATH 070 with a C- or better; or a score of 70 or higher on ACCUPLACER EA exam; or 58 or higher on Intermediate Alg Placement Test-CAT 4 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

CHEM 207 Forensic Science

Basic theory and methods for scientific investigation of physical evidence found at the scene of a crime. Emphasis on laboratory analysis currently in use.
3 Cr. Fall GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

CHEM 210 General Chemistry 1

General chemistry principles. Stoichiometry, solutions, bonding, quantum chemistry, thermochemistry, properties of solids, liquids and gases.
Prereq.: CHEM 160 with C or better OR ACT math subscore of 22 or higher OR MATH 072 with C- or better OR score of 87 or higher on Intermed Alg Placement Test-CAT OR score of 50 or higher on ACCUPLACER CLM exam 4 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

CHEM 211 General Chemistry 2

Kinetics, chemical equilibrium, acid-base chemistry, solubility equilibrium, thermodynamics, electrochemistry, coordination chemistry, nuclear chemistry, and descriptive chemistry.
Prereq.: CHEM 210, C or better (not C-) 4 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

CHEM 240 Basic Organic Chemistry

Structure, nomenclature, preparation, stereochemistry, mechanisms and reactions of organic compounds.
Prereq.: C or better (not C-) in CHEM 210. 4 Cr. Fall

Student Learning Outcomes

1. Use appropriate terminology to describe chemical structure and bonding in organic chemistry.
2. Identify organic functional groups and apply appropriate strategies involved in interconversion of these groups.
3. Identify and use appropriate terminology to describe key reaction mechanisms.
4. Describe how stereochemistry is related to biomolecules.
5. Outline the syntheses of simple organic molecules to describe organic reactions.

CHEM 241 Basic Biochemistry

Biological molecules, enzyme functions, and metabolic pathways.
Prereq.: CHEM 240 or CHEM 310 4 Cr. Spring

Student Learning Outcomes
1. Describe the structure and function of biomolecules (bio-macromolecules): carbohydrates, lipids, proteins and nucleic acids.
2. Describe secondary, tertiary and quaternary structure of proteins, the intermolecular forces that determine macromolecular structure and function as related to transport of oxygen, muscle contraction and antigen-antibody interactions.
3. Classify enzymes and enzyme catalyzed reactions and describe enzyme catalytic and kinetic mechanisms.
4. Describe the chemical basis and overall fundamentals of metabolism, classification of metabolic pathways, high energy compounds and integration of metabolic pathways.
5. Describe in detail the major metabolic pathways: not limited to glycolysis, gluconeogenesis, pentose phosphate shunt. TCA (Krebs) cycle, glycogen metabolism, electron transport chain, oxidative phosphorylation and photosynthesis.
6. Apply fundamental laboratory methods and analytical techniques to analyze biomolecules.

CHEM 307 Advanced Forensic Science

Analysis of physical evidence through the use of laboratory instrumentation. Sample collection and preparation methods and techniques.
Prereq.: CHEM 207 3 Cr. DEMAND GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

CHEM 310 Organic Chemistry 1

Structure, nomenclature, preparation, stereochemistry and reactions of organic compounds; spectroscopy. The first semester of a full-year course with a mechanistic emphasis, especially for chemistry, biomedical science, biotechnology, cell biology and prepharmacy majors.
Prereq.: C- or better in CHEM 211. 5 Cr. Fall

Student Learning Outcomes
1. Use chemical structure and bonding to identify and illustrate bonding types; to calculate formal charges and oxidation numbers; to identify potential nucleophiles and electrophiles; to recognize and name functional groups; and to determine relative acid strengths.
2. Use curved arrows, potential energy diagrams, and structures of transition states to describe and analyze reactions involving alcohols, alkenes, halides, and alkynes.
3. Draw and interpret 3-D structures of organic molecules using wedge-and-dash diagrams, chair conformations, Newman projections, and Fischer projections. Students will differentiate enantiomers and diastereomers and identify R/S stereochemistry.
4. Apply their understanding of organic reactions to design multi-step syntheses of small organic molecules.
5. Perform laboratory experiments that demonstrate the basic techniques used to purify and characterize organic products.

CHEM 311 Organic Chemistry 2

Structure, nomenclature, preparation, stereochemistry and reactions of organic compounds; spectroscopy. The second semester of a full-year course with a mechanistic emphasis, especially for chemistry, biomedical science, biotechnology, cell biology and prepharmacy majors.
Prereq.: CHEM 310 4 Cr. Spring

Student Learning Outcomes
1. Identify conjugated/ aromatic systems and differentiate the reaction mechanisms compared to isolated alkenes.
2. Interpret 1H and 13C NMR, IR, GC-MS, and UV-Vis spectra to determine the structure of organic molecules.
3. Describe and analyze reactions involving organometallics, ethers, aldehydes, ketones, carboxylic esters, and carboxylic acids.
4. Apply their understanding of organic reactions to design multi-step syntheses of small organic molecules.
5. Perform laboratory experiments that demonstrate common organic transformations. Students will use GC-MS, IR, and NMR instruments to characterize their reaction products.

CHEM 320 Environmental Chemistry

Identification and analysis of elements and compounds of environmental importance. Special attention to pollutants and toxins.
Prereq.: C or better (not C-) in CHEM 210. 4 Cr. DEMAND

Student Learning Outcomes
1. Use and understand chemical instrumentation relevant to environmental chemistry measurements including GC, HPLC, pH measurements, Atomic Absorbance/Emission, fluorescence, titration

equipment.
2. Present a class seminar presentation to peers & professor on an environmentally related subject within the realm of chemistry 3. Apply solution preparation techniques, calibrations and calibration standards.
4. Address issues related to earth's soil, atmosphere, and water resources.
5. Understand the chemical role of fossil fuels, toxicology, Inorganic metals and organic chemicals in the environment.
6. Understand the environmental impact of agriculture on the environment .
7. Maintain a proper laboratory notebook.

CHEM 350 Quantitative Analysis

Principles and practice of quantitative analysis of the chemical content of matter. Physico-chemical principles, and practical methodology. Titrimetric, spectrophotometric, potentiometric, and chromatographic methods.
Prereq.: C or better in CHEM 211 4 Cr. Fall

Student Learning Outcomes

1. Interpret numerical data appropriately via statistical techniques.
2. Predict, interpret and apply aqueous solution speciation in precipitation, acid-base, redox, and complexation systems.
3. Identify and apply basic principles, capabilities and limitations of potentiometric, spectroscopic, and chromatographic methods of analysis.
4. Record an introduction, experimental protocol, all data and observations, analysis of data, and brief discussion of results for each experiment in a laboratory notebook.
5. Accurately and precisely quantitate various unknown control samples via titrimetric and instrumental techniques.

CHEM 391 Chemical Information

Literature searching workshops culminating in a written literature review. Attendance at departmental seminars is required. Normally taken in spring semester of junior year.
Prereq.: CHEM 310 and admission to a chemistry or biochemistry major 1 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate proficiency in finding and retrieving primary chemical and biochemical literature using Chemical Abstracts (SciFinder Scholar), Scopus, PubMed (Medline), and Refworks.
2. Apply patent, Chemical Abstract Number, reaction, structure and chemical process search strategies to retrieve and evaluate primary literature.
3. Apply the methods and techniques of scientific literature searching in the preparation of a literature review/research proposal.
4. Analyze information and evaluate references in the preparation of a literature review/research proposal.
5. Interact with seminar speakers through asking questions during departmental seminars.

CHEM 420 Physical Chemistry 1

Application of fundamental laws and theoretical principles to real and ideal gases, thermodynamics, systems of variable composition, chemical equilibrium, phase equilibrium, the phase rule, solutions, colligative properties, condensed phase equilibria, and nonideal systems.
Prereq.: CHEM 350, MATH 212 or MATH 222, PHYS 232 or PHYS 235 4 Cr. Fall

Student Learning Outcomes

1. Interpret and demonstrate thermodynamics and physical chemistry concepts.
2. Identify parallel concepts of physical chemistry that will assist in mastering the material of physical chemistry.
3. Critically expand upon problem-solving skills, including critical reading and critical thinking.
4. Enhance your ability to identify, formulate, and problem solve thermodynamic and physical chemistry related problems.
5. Employ the proper technique to solve a problem and/or identify the formula appropriate for the problem.
6. Derive, determine, and calculate the correct answer using of algebra complexities or unit conversions.
7. Illustrate and negotiate working in groups successfully.
8. Successfully summarize and communicate the results of your work in written and oral assignments.
9. Improve upon students' self-confidence and self-reliance.

CHEM 421 Physical Chemistry 2

Application of fundamental laws and theoretical principles to equilibria in electrochemical cells, surface phenonmena, the structure of matter, quantum mechanics, atomic and molecular spectroscopy, bonding, solids, electrical conduction,

and kinetics.
Prereq.: CHEM 420 4 Cr. Spring

Student Learning Outcomes
1. Interpret and demonstrate both kinetic and quantum mechanical physical chemistry concepts.
2. Identify parallel concepts of physical chemistry that will assist in mastering the material of physical chemistry.
3. Critically expand upon problem-solving skills, including critical reading and critical thinking.
4. Enhance your ability to identify, formulate, and problem solve kinetic and quantum mechanical and physical chemistry related problems.
5. Employ the proper technique to solve a problem and/or identify the formula appropriate for the problem.
6. Derive and determine calculate the correct answer using of algebra complexities or unit conversions.
7. Illustrate and negotiate working in groups successfully.
8. Successfully summarize and communicate the results of your work in written and oral assignments.
9. Improve upon students' self-confidence and self-reliance.

CHEM 422 Physical Chemistry Lab 1

Laboratory to complement Physical Chemistry 1 (420-520). A quantitative measurement of properties and phenomena of chemical interest and their interpretation by use of chemical principles.
Prereq.: CHEM 420 - CHEM 520 1 Cr. Fall

Student Learning Outcomes
1. Demonstrate and provide experiences in designing experiments.
2. Ability to apply knowledge of thermodynamics in understanding and interpretation of experimental results.
3. Differentiate and develop the ability to use standard analyses to correctly describe the numerical significance of experimental results.
4. Ability to apply knowledge of mathematics and science to problems pertaining to thermodynamic properties.
5. Enhance and expand upon laboratory safety into the laboratory experiments and designs.
6. Illustrate and negotiate working in groups successfully.
7. Exercise and improve upon good lab notebook skills.
8. Successfully summarize and communicate the results of your work in written reports.

CHEM 423 Physical Chemistry Lab 2

Laboratory to complement Physical Chemistry 2 (421-521). A quantitative measurement of properties and phenomena of chemical interest and their interpretation by use of chemical principles.
Prereq.: CHEM 421 - CHEM 521 1 Cr. Spring

Student Learning Outcomes
1. Demonstrate and provide experiences in designing experiments.
2. Ability to apply knowledge of chemical kinetics, quantum mechanics in understanding and interpretation of experimental results.
3. Differentiate and develop the ability to use standard analyses to correctly describe the numerical significance of experimental results.
4. Ability to apply knowledge of mathematics and science to problems pertaining to thermodynamic properties.
5. Enhance and expand upon laboratory safety into the laboratory experiments and designs.
6. Illustrate and negotiate working in groups successfully.
7. Exercise and improve upon good lab notebook skills.
8. Successfully summarize and communicate the results of your work in written reports.

CHEM 430 Inorganic Chemistry 1

Concepts of inorganic chemistry; electronic structures of atoms; crystal structure; chemical bonding including molecular orbital theory; nomenclature, bonding and structure of coordination compounds.
Prereq.: CHEM 420 4 Cr. Fall

Student Learning Outcomes
1. Use atomic structure to predict nuclear stability, balance nuclear chemical equations. Use electron configuration to predict molecular structure and stability. Use various models of bonding to predict structure and reactivity.
2. Recognize and classify crystalline materials. Determine unit cell geometry. Determine the packing efficiency and hole sizes in crystal structures. Predict structures based on ionic radii. Predict physical properties of materials based on crystal structure.
3. Classify all materials based on the accepted definitions of acid base theory. Apply Lewis acid base

theory to chemical reactions. Apply hard-soft acid base theory to predict stability, chemical reactivity, solubility, etc. Apply acid base chemistry to oxidation-reduction reactions. Use diagrams to predict oxidation-reduction reactions.
4. Determine symmetry of molecules and solid-state structures. Apply group theory to predict molecular spectroscopy.
5. Employ appropriate physical techniques to analyze materials and critically assess the merit of results. Construct methods to synthesize, purify, and characterize various materials including the appropriate handling of wastes generated and any safety precautions needed. Present the results of synthetic procedures to peers in a formal setting.

CHEM 431 Inorganic Chemistry 2

Application of the concepts of inorganic chemistry to chemical elements and compounds. Coordination chemistry including ligand field theory.
Prereq.: CHEM 430 2 Cr. Spring

Student Learning Outcomes

1. Discuss advanced materials and methods in the area of inorganic chemistry.
2. Discuss and predict trends in reactivity of the elements based on groups. Discuss abundance and extraction of the elements from their ores.
3. Present advanced topic lectures in inorganic chemistry ranging from solid-state materials chemistry to bio-inorganic chemistry. Prepare presentations using A-V tools such as PowerPoint incorporating review of original research in the topic area and demonstrations if appropriate.

CHEM 440 Environmental Analytical Chemistry (2,3)

Theoretical and practical aspects of chemical analysis of soils, water, and air samples. Emphasis on sample preparation.
Prereq.: CHEM 350 3 Cr. DEMAND

Student Learning Outcomes

1. Use and understand analytical chemical instrumentation relevant to environmental chemistry measurements including GC, HPLC, pH measurements, Atomic Absorbance/Emission, fluorescence, titration equipment.
2. Present a class seminar or project to peers & professor on an environmentally related subject within the realm of chemistry.
3. Apply solution preparation techniques, calibrations and calibration standards.
4. Maintain a proper laboratory notebook which records data, demonstrates data processing, and presents results in an articulate manner.
5. Address analytical measurement and equilibrium issues related to earth's soil, atmosphere, and water resources.
6. Understand the role of emergent chemicals in the environment.
7. Understand the role of basic statistical processes such as error measurement and sampling variability.

CHEM 444 Chemistry Internship

Full or part-time participation in industry or a government agency. Max. of 5 credits may be counted toward major requirements, remaining credits may be used as general electives. Credit awarded at a rate of 1 credit per 75 hours.
Coreq.: 1-13 Cr. Fall | Spring | Summer

CHEM 450 Instrumental Analysis

Major instrumental methods of chemical analysis including spectroscopic, electrometric, and chromatographic methods.
Prereq.: CHEM 350, CHEM 420 - CHEM 520 or CHEM 482 , CHEM 582 4 Cr. Spring

Student Learning Outcomes

1. Describe the process of signal transduction from chemical identity and concentration to electronic signals such as voltage and current, and know how to accurately measure and interpret these signals.
2. Explain fundamental physical and chemical principles of analytical chemistry instrumentation including chromatography, mass spectrometry, optical spectroscopy (including fourier transform techniques), and possibly including lasers, nuclear magnetic resonance and electroanalytical techniques.
3. Compare and contrast different instrumental approaches to analytical problem solving using figures of merit such as signal-to-noise, sensitivity and limit of detection.
4. Apply appropriate calibration methods such as external calibration, internal standard calibration and standard addition calibration where appropriate.
5. Write professional lab reports that exhibit proper writing mechanics, clear organization, transfer digital data into Excel for generation of appropriate tables and graphs, and complete and appropriate interpretation of results with respect to instrumental theory.

CHEM 452 Nuclear Chemistry and Radiochemistry

Nuclear stability and structure; decay systematics and energetics; interactions of radiation with matter; nuclear energy; detection, measurement and characterization of radiation; application to chemical and biological problems.
Prereq.: CHEM 211 3 Cr. Even Spring

Student Learning Outcomes

1. Use atomic structure to predict nuclear stability, balance nuclear chemical equations. Predict decay modes. Predict decay rates. Calculate rates of decay and energies of nuclear reactions. Apply E=mC2.
2. Discuss the various interactions of radiation with matter. Determine the shielding requirements necessary to block radiation of different forms. Predict the health effects of exposure to various amounts and types of ionizing radiation. Recognize all sources of ionizing radiation. Determine the proper safety precautions necessary to safely work with radioactive sources. Calculate dose and exposures for all radiation types. Explain stochastic and genetic damage.
3. Operate all counting equipment effectively including survey meters and various radiation detectors. Employ appropriate techniques to analyze radioactive materials and critically assess the merit of results. Employ proper shielding and monitoring of radioactive sources including the handling of wastes generated. Maintain accurate records including a properly formatted laboratory notebook.
4. Write formal laboratory reports following the ACS style guide. Effectively present a topic in nuclear or radiochemistry to their peers in a formal setting.

CHEM 453 Organic Mechanisms and Synthesis

A course in advanced organic chemistry involving key mechanisms and reactions; strategies and tactics of complex organic syntheses.
Prereq.: CHEM 311 3 Cr. DEMAND

Student Learning Outcomes

1. Use organic structure to understand chemical reactivity.
2. Demonstrate knowledge of protecting groups in organic synthesis.
3. Apply asymmetric synthetic methods in the building of chiral molecules.
4. Present a lecture on an assigned natural product synthesis.

CHEM 460 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 461 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 462 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class scedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 463 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 464 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 465 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of insturctor.
Coreq.: 1-4 Cr. DEMAND

CHEM 466 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 467 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 468 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 469 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 480 Biochemistry 1

The chemical structure and function of most fundamental biomolecules; carbohydrates, lipids and proteins. Fundamentals of enzyme function and metabolism.
Prereq.: CHEM 311 4 Cr. Fall

Student Learning Outcomes

1. Have knowledge of both the function of and structure of lipids, proteins, nucleic acids and carbohydrates.
2. Apply the knowledge of macromolecular structure to explain the chemical basis for molecular processes, including, transport of oxygen, muscle contraction, enzyme catalysis and antigen-antibody interactions, etc.
3. Have an in depth understanding of selected metabolic pathways: including their purpose, thermodynamics and regulation.
4. Be able to purify and analyze biological molecules.
5. Be able to interpret data that they have collected in a biochemistry laboratory.
6. Know the fundamental concepts (theoretical and experimental) of enzyme kinetics.

CHEM 481 Biochemistry 2

Major metabolic pathways, biochemistry of nucleic acids, and biophysical techniques.
Prereq.: CHEM 480 4 Cr. Spring

Student Learning Outcomes

1. Know the light and dark reactions of photosynthesis at the molecular level.
2. Have knowledge of both the function of and structure of nucleic acids.
3. Have an understanding transcription, translation and replication at the molecular level, including the structure function relationships of the ribosome, a DNA polymerase and an RNA polymerase.
4. Know the structure-function relations of a selected variety of membrane channels.
5. Be knowledgeable about a few different cellular signaling systems.
6. Be able to use molecular biology techniques to subclone a gene.
7. Be able to keep a professional laboratory notebook and document laboratory experiences including experimental data collection, data analysis and conclusions.

CHEM 482 Biophysical Chemistry

Biomolecular structure, thermodynamics and kinetics, and their study through spectroscopic techniques.
Prereq.: CHEM 480, MATH 212 or MATH 222, PHYS 232 or PHYS 235 4 Cr. Spring

Student Learning Outcomes

1. Identify fundamental thermodynamic state functions, e.g., free energy, and apply this knowledge to analyze chemical and physical equilibria in biological systems, e.g., the protein folding and ligand-binding.
2. Apply the theoretical models of molecular mechanics and molecular dynamics to study to biomolecular structure and function.
3. Describe in detail the theory and practice of physical methods such as chromatography, centrifugation, mass spectrometry and electrophoresis to examine biomolecular structure.
4. Describe classical theory and applications of spectroscopy to biomolecular structure, function and interactions (not limited to absorption, emission, and nuclear magnetic resonance spectroscopies).
5. Use appropriate methodologies to crystalize biological molecules, and apply theory and concepts of Bragg+s Law and the von Laue conditions of x+ray diffraction to macromolecular crystal structure.
6. Develop critical thinking, problem solving and communication skills in relation to the physical and quantitative treatment of biomolecular structure via the review and critique of primary literature on the subjects of protein folding thermodynamics and kinetics, protein engineering and biomolecular design.

CHEM 489 Undergraduate Research in Chemistry

A laboratory investigation of a research problem in chemistry. May be repeated to a maximum of 16 credits. Max of 5 credits allowed toward a chemistry major. Minimum 3 lab hours per week for 1 credit (or consent of instructor).
Prereq.: CHEM 391 Coreq.: 1-4 Cr. DEMAND

Student Learning Outcomes

1. Conduct scientific literature searches, procure research articles through the library, read, interpret and extract information from journal articles relevant to the assigned research project.

2. Design experimental procedures, conduct laboratory experiments independently in a research laboratory environment and collect experimental data.
3. Interpret results, reach conclusions, and generate new research ideas based on results.
4. Present research results and conclusions professionally, and write comprehensive report(s) of the quality expected of by ACS for a graduating chemistry or biochemistry major.

CHEM 490 Seminar

Lectures, reading, discussion on selected topics. The successful conclusion of the course involves a formal presentation by the student in the form of a seminar to the department. May be repeated to a max. of 4 credits.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Attend weekly chemistry seminar series. Understand the nature of seminars given by research academics, industrial fellows, peers, and administrative career specialists.
2. Learn to write summary abstracts of the speaker's presentation detailing the major points of discussion.
3. Meet with speakers to discuss aspects of research/career tracks of interest. Investigate future career or research opportunities available with the speakers institution.
4. Partake in seminar discussions related to exploring and finding student centered research/internship experiences as part of the chemistry department's capstone experience.

CHEM 491 Senior Thesis

Conclusion of the capstone experience involving a formal presentation of a research or library project in the form of a seminar to the department, and a written paper following departmental guidelines. Attendance at departmental seminars is required. Saturday symposium may be scheduled near end of semester depending on enrollment. Normally taken in spring semester of senior year.
Prereq.: CHEM 391 2 Cr. Fall | Spring

Student Learning Outcomes

1. Write a senior thesis paper on a research or literature topic that exhibits: i. a balanced presentation of relevant and legitimate information that clearly supports a central purpose. ii. ideas that are arranged logically and flow smoothly from one to another. iii. sentences that are well-phrased and varied in length and structure. iv. word choice that is consistently precise and accurate. v. writing free or almost free of errors. vi. format and cited references following the proper professional guidelines. vii. a thoughtful, in-depth analysis of a significant topic .
2. Present a seminar on senior thesis research or literature topic that exhibits: i. a central purpose that is clearly introduced ii. all relevant background information presented in a logical fashion iii. logical arrangement and a thoughtful, in depth analysis of a significant topic iv. visual aids that are clearly designed and effectively used v. clear delivery and the vocabulary that is consistently professional vi. a sophisticated understanding of the subject vii. a length between 25-35 minutes

Child & Family Studies (CFS)

CFS 200 Introduction to Education

Children and families, the role of the teacher, the role of schools and educational programs in communities and society, history and philosophy of education, educational futures, teacher education knowledge base, and contemporary issues. Same as SPED/ED 200.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Use the role of education in a pluralistic society, the strategies for organizing and managing schools and the historical and philosophical bases of education to describe the role of education in American society.
2. Describe how family relationships impact children's learning.
3. Describe contemporary issues in education and speculate about future issues in education to broaden perspectives about students and teaching.
4. Use critical thinking skills to analyze appropriate student-teacher behaviors by observing students and teachers on site.
5. Evaluate prior educational experiences, values and perceptions about teaching and students.

CFS 220 Introduction to Parents and Children

Child development, parent development; the co-relationship between mothers and fathers and their children in the developing years. Traits and characteristics of healthy families.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

CFS 260 Children in a Changing World (Diversity)
Societal change, including the relationship between women and men, and its impact on childhood. Childhood in U.S. ethnic groups and in non-western cultures. Implications for those working with children in education, social services, health care, etc.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

CFS 315 Introduction to Early Education
Foundations, historical and theoretical backgrounds, models of early education, cultural relationships of teachers and young children. Professional viewpoints from national organizations.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Compare philosophical foundations of early education and assess how these influence current practices in early childhood programs.
2. Identify differences in approaches to learning and performance and design instruction that uses a student's strengths.
3. Examine learning theory, subject matter, curriculum development and apply this in planning instruction to meet curriculum goals.
4. Discuss the role and responsibilities of professional early childhood teachers as they apply to ethical practice.
5. Examine the research base for best practices in early childhood education.

CFS 361 Practicum in Child Development
Practicum in a setting with young children.
1 Cr. DEMAND

CFS 362 Family Practicum
Working with diverse families including those with children with disabilities. Conduct parent interviews. Interview teachers regarding family involvement strategies and design involvement plan, or do respite care for a family that has a child with a disability.
1 Cr. DEMAND

CFS 363 Practicum in Early Childhood Methods
Practicums in programs for young children.
1 Cr. DEMAND

CFS 404 Birth Order in the Family
Implications of birth order on the family; implications of the family constellation. Instructor will provide more depth on each topic area.
1 Cr. DEMAND

Student Learning Outcomes
1. Examine family systems and the evolution of narrative, specifically as it applies to families.
2. Analyze dominant characteristics of each birth order position as influenced by the needs of the larger family system.
3. Evaluate the value assumptions underlying the functioning of each birth order position.
4. Create a therapeutic model that fits his or her own theoretical, clinical, and personal style.

CFS 405 Selected Topics in Child and Family Studies
Current issues, child/family programs, teaching methods. May be repeated up to 4 credits.
Coreq.: 1-4 Cr. DEMAND

Student Learning Outcomes
1. Analyze current issues, program, teaching methods related to specific topic selected for study.

CFS 406 Early Literacy in Inclusionary Settings
Language and literacy development (including English as a second language) in the preschool years. Creating and evaluating developmentally appropriate literacy rich environments for children with diverse needs. 2.75 GPA requirement.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Examine the process of second language acquisition and develop strategies to support young English Language Learners.
2. Assess early literacy practices for developmental appropriateness.
3. Evaluate environments for inclusion of literacy practices in early childhood programs.
4. Review and incorporate different kinds of children's literature to support and promote early literacy learning.
5. Review and assess literature that depicts children with disabilities.

CFS 408 Authentic Assessment for Infants and Young Children
Authentic assessment strategies for infants, toddlers, and young children with and without disabilities. Includes observational strategies, play-based assessment and portfolios to link assessment to appropriate intervention. GPA requirement of

2.75.
3 Cr. Fall | Spring

CFS 413 Guidance of Young Children

Managing the classroom and daily routines. Effective communication. Alternate solutions to discipline young children. Crisis management techniques including working with special education. GPA requirement of 2.75.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Develop and practice strategies for creating emotionally healthy environments for diverse populations of children.
2. Review strategies for implementing a guidance approach to mistaken behavior in young children.
3. Identify signs of stress in young children.
4. Practice reading and interpreting young children's body language.

CFS 415 Foundations of Parent/Family Education

Introduction to the history, philosophy and program models for parent/family education with emphasis on Early Childhood Family Education in Minnesota. Diverse family systems and needs for parent education. Professional and ethical behavioral outlined.
3 Cr. Fall

Student Learning Outcomes

1. Identify the historical roots and development of parent education as a field of study.
2. Examine and compare different theoretical approaches to explaining and studying parenting and parent-child relations and assess their own beliefs about these approaches.
3. Analyze the diversity of family structures and lifestyles that form the context for contemporary parenting.
4. Apply quality indicators in assessing the functioning of parent education programs in their communities.
5. Examine the function and limitations of evaluation and its application in parent education.
6. Examine a variety of evidence-based parenting programs and identify the goals and assumptions about parents and children and parenting practices as presented in these programs.
7. Compare the cultural and social class differences reflected in parenting attitudes and behaviors and how these relate to parent education program design.

CFS 419 Professional/Ethical Considerations in Early Childhood

Ethical decision making. Personal, professional, and legal considerations in working with young children and their families.
3 Cr. DEMAND

CFS 421 Development of Young Children

Typical and atypical development of children, prenatal through 10 years. Methods of observation, application of development theories to early childhood practices.
Coreq.: CFS 361 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify the main data collection techniques used in developmental research and explain the advantages and limitations of each.
2. Apply research on developmental trends in and influential factors related to children's emergent literacy and reading skills.
3. Examine the developmental course and implications of children's attachment to caregivers.
4. Explain how genes and environmental experiences interact in a child's development.
5. Analyze the basic principles of children's physical, social and emotional development.
6. Differentiate among and critique the theoretical frameworks of language development.
7. Identify and explain the primary contributions of family, culture and community to a child's development.
8. Examine the development of friendships and other peer relationships during childhood and adolescence.

CFS 422 Family Studies: Parent Involvement

Diverse families and their development including families with children with disabilities. Current issues impacting families. Communication strategies and parent partnerships. Needs of families and resources. Strategies for family involvement.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze families and communities as dynamic, complex social systems from a variety of theoretical perspectives.
2. Examine the impact of social and historical context on family life and dynamics.
3. Compare models and strategies for involving parents and design programs to match community needs.

4. Review family needs and be able to identify community resources for meeting these needs.
5. Examine parenthood and family life as developmental processes.
6. Review family diversity and identify issues related to family structure , social class and culture.

CFS 423 Methods in Early Education

Review knowledge of basic concepts of curriculum, materials, and methodology necessary for services to young children in inclusive educational settings. This course includes the UDWR through the completion of the Teacher Work Sample. Students must earn a B- or higher grade in this course to continue on to CFS 460, Student Teaching in Early Education, where the TWS assignment is completed.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Design lesson and unit plans for young children.
2. Identify resources for planning and creating learning activities for young children.
3. Practice developing and implementing lesson plans with young children.
4. Create an assessment plan for learning segments.
5. Analyze context for learning in preparation to preparing lesson plans.
6. Design and implement strategies for creating a supportive and cooperative child friendly room.

CFS 424 Administration of Early Education

Programs in early childhood education. Current legislation.
2 Cr. DEMAND

CFS 428 Children's Literature in Pre-K - Grade 3 Classroom

Children's literature Birth through age 8. Locate, evaluate and select high-quality children's literature to be used for a variety of purposes with children birth through age 8. 2.75 GPA requirement.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate a variety of strategies for engaging young children in literacy activities.
2. Demonstrate skills in oral reading and storytelling.
3. Demonstrate knowledge of and ability to promote language development through literature.
4. Assess different genres, authors, illustrators and literacy elements in children's literature.
5. Assess and use literature appropriate for children birth through age 8.
6. Demonstrate knowledge of strategies to promote home/school partnerships.
7. Demonstrate motivating students to read.

CFS 431 Development of Infants and Toddlers

Child development during infancy and toddler stages, theory of infant development, understanding the range of normality, typical and atypical development.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Examine knowledge of development from conception through toddlerhood and compare typical and atypical patterns of development.
2. Will compare and analyze cross-cultural patterns of development.
3. Analyze long-term effects of infant development on the child, family and society.
4. Apply knowledge of development to define appropriate curriculum planning for infants and toddlers.
5. Practice critical thinking skills to identify and problem-solve ethical issues related to infant care and development.

CFS 433 Methods: Young Children with Disabilities

Part of Methods Block designed to review knowledge of basic concepts of individualized group education for young children with and without disabilities. Understanding curriculum, materials, and methodology necessary for young children with disabilities in ECSE and inclusive educational settings.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Examine and create components of Individualized Education Plans (IEPs).
2. Select and evaluate instructional materials linking assessment to instruction.
3. Plan and apply effective strategies when working with children with disabilities.
4. Assess educational strategies to meet individual needs of children.
5. Examine laws mandating early intervention.
6. Demonstrate knowledge of strategies to work effectively in partnership with parents, professionals and paraprofessionals.

CFS 443 Methods and Strategies for Infants and Toddlers

Teaching strategies for infants and toddlers with and without disabilities. Assessment, intervention, program development, home visiting and working as a team.
Prereq.: CFS 431 3 Cr. Fall | Spring

Student Learning Outcomes

1. Acquire and integrate knowledge of inclusive childcare.
2. Acquire and integrate knowledge of infants and toddlers with and without disabilities.
3. Acquire and integrate knowledge of planning infant/toddler curriculum environments.
4. Acquire and integrate knowledge of selecting age and developmentally appropriate toys for infants and toddlers.
5. Understand the administration and evaluation of infant/toddler programs.
6. Understand the importance of transitions in the daily life of infants and toddlers.
7. Understand infant and child typical and atypical development 8. Understand working effectively with parents.
9. Understand cultural differences in care giving practices and their implications in infant and toddler childcare.
10. Understand language development and stimulation strategies.

CFS 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

CFS 460 Early Education Student Teaching

Supervised student teaching in early childhood settings. X grading option.
6 Cr. Fall | Spring

Student Learning Outcomes

1. Create and implement lesson plans for young children in Pre-K placement.
2. Assess own performance using videotape clips of teaching learning segments in Pre-K placement.
3. Plan and implement lessons for Pre-K class and assess student learning using the edTPA format.
4. Practice classroom management and child guidance skills in Pre-K classroom.
5. Apply Early Childhood Indicators of Progress to assessment of young children.
6. Construct a file of teaching resources to share with peers in student teaching.

CFS 461 Pre-professional Seminar

For student teachers. Professional ethics and standards, development of a personal education philosophy, professional goals and competencies, contemporary issues.
1 Cr. DEMAND

College Transitions (COLL)

COLL 110 Reading and Study Strategies

Application of problem solving strategies, study strategies, notetaking and test taking to enhance individual learning experiences and to prepare for examinations in college course work.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Use a problem-solving approach to learning college course content.
2. Identify and transfer appropriate learning strategies to a wide variety of learning contexts.
3. Select and apply appropriate strategies for reading expository and electronic text.

COLL 111 Career Planning

Exploration of interests, values, abilities, personality, and goals as they relate to educational and career planning. Self-assessment, major and career information research, decision-making, workplace trends, resume writing, job searching skills, and career management.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify life experiences, personal characteristics, values, interests, motives and abilities that influence their occupational choices.
2. Evaluate, integrate and prioritize various life roles.
3. Use various decision-making and learning styles and articulate what constitutes effective decision making for each student.
4. Develop a support system for major and career decisions.
5. Identify possible majors and careers that are congruent with individual interests, values and abilities.
6. Describe various factors that influence career

choices and career development.
7. Describe how others impact identity development and connect it to family history/careers, environment and life changes.
8. Describe what things outside individual control might influence career decisions now and in the future.
9. Connect past and present academic successes and academic difficulties to formulate academic plan.
10. Synthesize personal information about majors and careers.

COLL 120 Power Reading

Instruction and practice in strategies to enhance critical reading and reading flexibility through the application of efficient comprehension strategies and vocabulary development.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Demonstrate an ability to develop and refine concrete and abstract vocabulary including denotative and connotative word meanings.
2. Read textbooks and other academic texts in a critical and evaluative manner.
3. Determine how language affects our attitudes and perceptions of the world.
4. Formulate a variety of reading approaches and apply them to different types of material in order to read flexibly and efficiently.
5. Examine how tone, source, attitude, and inference affect our ability to read objectively.

COLL 121 Orientation for Non-traditional Students

This course is designed to acquaint the entering non-traditional student with the services of the university.
1 Cr. Fall

Student Learning Outcomes

1. Utilize personal experience and social awareness to compare and contrast available educational opportunities.
2. Deploy and utilize campus services, programs, and resources to be a successful student and lifelong learner.
3. Draw connections between their own history (interests, abilities, experience, limitations) and projected future (perceiving growth and mastery in studies, professional opportunities and career development).
4. Identify and apply effective strategies to reach articulated academic and life goals.
5. Describe and identify classroom norms, university policies/procedures, faculty and peer expectations.
6. Explore his / her personal identity as it fits in a diverse university community.

COLL 150 Discovering the College Experience

Student behaviors, attitudes, skills and information to achieve college success. Topics include time management, goal setting, academic programs and advising, student services and resources, relationships and health. Format includes interactive exercises, guest lectures and application assignments. Not for credit if Coll 121 or ESL 150 completed.
2 Cr. Fall | Spring

Student Learning Outcomes

1. Identify appropriate campus resources and opportunities that will contribute to their educational experience, goals, and campus engagement.
2. Build relationships to St. Cloud State University faculty, staff and students.
3. Articulate how they fit a diverse community by exploring their identities.
4. Describe classroom norms, university policies/procedures, and faculty and peer expectations.
5. Articulate academic and life goals by applying effective strategies to reach them.

COLL 196 First Year Seminar

Specific subjects selected to meet educational needs. Exact nature of course will be defined by the department.
3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

COLL 197 First Year Seminar

Specific subjects selected to meet educational needs. Exact nature of course will be defined by the department.
3 Cr. Fall | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS

COLL 201 Preparing for the Minnesota Teacher Licensing Exam in Reading

Theoretical underpinnings of the teacher certification examination in reading, focusing on standards that frame the exam, working through "basic skills" exams, and the patterns and problems inherent to such exams. Sources and symptoms of

test anxiety and management tools. Designed for pre-service teachers.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify meta-cognitive strategies for test-taking 2. Describe their own test-taking abilities and potential barriers to success 3. Construct and demonstrate techniques for developing memory 4. Differentiate ways to quickly access mental schema and probe prior knowledge 5. Make connections between their stores of knowledge and the questions they are asked on exams 6. Develop strategies to become more fluent readers with stronger comprehension skills

COLL 202 Preparing for the Minnesota Teacher Licensing Exam in Writing

Theoretical underpinnings of the teacher certification examination in writing, focusing on standards that frame the exam, working through "basic skills" exams, and the patterns and problems inherent to such exams. Sources and symptoms of test anxiety and management tools. Designed for pre-service teachers.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify meta-cognitive strategies for test-taking 2. Describe their own test-taking abilities and potential barriers to success 3. Construct and demonstrate new techniques for developing memory 4. Differentiate ways to quickly access mental schema and probe prior knowledge 5. Make connections between their stores of knowledge and the questions they are asked on exams 6. Develop strategies to become more fluent readers with stronger comprehension skills 7. Apply the six traits of writing essays so that the person scoring their exam can recognize their writing skills

COLL 203 Preparing for the Minnesota Teacher Licensing Exam in Mathematics

Assist pre-service teacher in preparing for the mathematics portion of the basic skills exam. Focuses on exam content, testing skills, predicting questions and answers, pacing and memory development.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Students will be able to apply test taking strategies.
2. Students will develop ways to find quick access to prior knowledge.

Communication Sciences and Disorders (CSD)

CSD 130 Introduction to Human Communication Disorders (Diversity)

Communication disorders in children and adults; their incidence and effect on the individual and community.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

CSD 171 American Sign Language

Deaf culture and the development/role of American Sign Language. Acquisition of receptive skills and expressive use of American Sign Language.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

Student Learning Outcomes
1. Demonstrate the ASL communicative process through expressive and receptive course-specific vocabulary.
2. Demonstrate the ability to initiate and sustain a short dialogue in ASL.
3. Identify content specific commands, questions, and statements in ASL.
4. Use authority, point-of-view, and individual voice and style in ASL.
5. Employ syntax and usage appropriate to academic disciplines and the professional world through the use of ASL

CSD 220 Phonetics

The international phonetic alphabet. The phonemes of the English language from physiological and phonological perspectives. Utilization of the IPA to improve pronunciation skills and understanding American dialects.
3 Cr. Fall

CSD 230 Global Perspectives on Communication Disorders (Diversity)

Comparative perspectives and understanding of communication disorders around the globe; the intersection of educational and health issues with communication disorders.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

CSD 271 American Sign Language II

Deaf community as a linguistic and cultural group. Acquisition of intermediate receptive and expressive skills in ASL.
Prereq.: CSD 171 3 Cr. Spring

Student Learning Outcomes

1. Use high-beginner signed conversation skills.
2. Participate in a signed conversation at a high-beginner level.
3. Produce 1500 signed vocabulary items.
4. Demonstrate cultural competence after participation in one deaf community event.

CSD 322 Anatomy and Physiology of the Speech Mechanism

Gross anatomy and physiology of the structures and processes related to respiration, phonation, articulation and central nervous system functioning.
3 Cr. Spring

Student Learning Outcomes

1. Define terms referring to anatomical planes or movements such as anterior, superior, lateral, flexion, extension, and abduction.
2. Locate and label bones of the rib cage and spine, as well as muscles of the neck, chest and abdomen important for respiration.
3. Locate and label bones of the skull and face, as well as muscles of the face, neck and soft palate important for facial expression, swallowing and speech.
4. Locate and label cartilage and bones of the larynx by location and function.
5. Locate and label intrinsic and extrinsic muscles of the larynx by location and function.

CSD 326 Hearing and Speech Science

Characteristics and measurement of speech production and perception, anatomy and physiology of the auditory mechanism and an introduction to psychoacoustics.
3 Cr. Spring

Student Learning Outcomes

1. Define and measure fundamental properties of sound including; frequency (Hz), amplitude (dB SPL), pressure (dynes or cm of H2O) and signal-to-noise ratio.
2. Describe how sound waves are created, travel and are reflected, absorbed, reverberated or perceived, mechanically and physiologically.
3. Describe theories or models of respiration, phonation and vowel production including Boyle's law, Bernoulli's principle, Source-Filter theory and the Myoelastic Aerodynamic Theory of phonation.
4. Identify and describe unique characteristics of consonant types (e.g., stops vs. fricatives) and vowels on an acoustic waveform and/or spectrogram.
5. Describe etiologies, characteristics and consequences on communication for common disorders of respiration, phonation, articulation, resonance, hearing and auditory processing.
6. Analyze and interpret audiograms by identifying degree of hearing loss, type of hearing loss and audiometric configuration.
7. Describe the anatomy and physiology of the peripheral and central auditory mechanism.
8. Define and apply basic concepts in psychoacoustics to various 'real-world' listening situations.
9. Interpret how various disorders of the auditory mechanism impact speech and language development.
10. Differentiate voice disorders using perceptual and quantitative measures of pitch, loudness, range, variability and perturbation.

CSD 380 Language Remediation for the Mentally Retarded & Language Handicapped Child

Language development; tests of language; methods and materials. Not open to majors in Communication Disorders.
3 Cr. Fall

CSD 415 Topics in Speech-Language Pathology and Audiology

Specialized topics related to speech, language and hearing. Areas of current interest to faculty and/or students. A maximum of 6 credits can be applied to a master's degree program. Repeatable for students who have completed their Master's degree.
Coreq.: 1-2 Cr. Summer | DEMAND

Student Learning Outcomes

1. Provide an overview of the principles of INSERT TOPIC.
2. Apply skills in assessing and providing therapy to those who have INSERT COMMUNICATION DISORDER.
3. Evaluate and apply theoretical content to various clinical scenarios involving INSERT COMMUNICATION DISORDER.

CSD 426 Neurological Bases of Speech and Language

Neuroanatomy and neurophysiology of speech and language. Speech, language, cognitive, and swallowing disorders associated with different types of brain damage.
Prereq.: CSD 322 3 Cr. Fall

Student Learning Outcomes

1. Describe and/or identify the organization, landmarks, and structures of the human nervous system that are pertinent to speech, language, cognition and hearing.
2. Describe the simple functioning of a neuron in the brain.
3. Describe the functions of important areas and neural pathways in the brain that take part in the speech, language, cognitive and hearing processes.
4. Describe and analyze the signs and symptoms of a few common neurogenic communication disorders.
5. List and describe the uses of some of the diagnostic techniques available to evaluate neurological functions in adults.
6. Research peer-reviewed journal articles and books, and write a scientific report.

CSD 427 Language and Language Disorders in Adults

Typical language and cognition in adults, aging effects and the nature of language and cognitive disorders encountered in the aged population.
3 Cr. Spring

Student Learning Outcomes

1. Describe the typical language processing in adults based on neuropsychological models of cognitive-linguistic processes of language.
2. Analyze the effects of normal aging on cognitive and linguistic functions in communication.
3. Describe the etiologies (causes) of various communication disorders in the aged population.
4. Identify and discuss the characteristics of the typical communication disorders seen in the elderly.
5. Integrate the effects of typical and atypical language behaviors in communication functions of the elderly.

CSD 431 Voice Disorders

Types and causes of voice disorders, principles and procedures underlying the diagnosis and treatment of voice disorders.
Prereq.: CSD 322 3 Cr. Fall

CSD 432 Fluency Disorders

The nature and causes of disorders of fluency; approaches for assessing and treating fluency disorders.
3 Cr. Spring

Student Learning Outcomes

1. Explain at least two theories about the cause of stuttering that have been proven invalid and at least two theories about the cause of stuttering that are supported by current brain imaging research.
2. Compare and contrast 4 types of typical stutters seen in most preschool children with 4 types of atypical stutters most often seen in children and adults who stutter.
3. Name at least two standardized assessment tests for children who stutter and two standardized assessment tests for adults who stutter.
4. Describe two different kinds of therapy appropriate for preschool children who stutter and two different kinds of therapy appropriate for adults who stutter.
5. List and perform at least five stuttering therapy techniques used to facilitate fluent speech.

CSD 434 Articulation Disorders

Development of articulation in children; factors that enhance or impede development; diagnostic procedures used in articulation assessment; treatment strategies for disorders of articulation.
Prereq.: CSD 220 3 Cr. Spring

Student Learning Outcomes

1. List and describe stages and processes of typical speech sound/phonological development.
2. Describe atypical speech development.
3. Differentiate an articulation disorder from a phonological disorder.
4. Discuss risk factors for articulation/phonological disorders.
5. Administer an assessment protocol.
6. Analyze disordered speech using a variety of assessment tools.
7. Identify/discuss intervention techniques/approaches for a variety of types/ages of phonological disorder.

CSD 440 Communication Disorders of the Aged

Management of older persons with speech, language, and hearing problems.
2 Cr. Fall

CSD 441 Hearing Measurement

Causes and effects of hearing disorders, classification of hearing loss, and medical management procedures. Basic audiometric procedures. Laboratory participation and clinical competency demonstration required.
Prereq.: CSD 326 3 Cr. Fall

Student Learning Outcomes
1. Describe the scope of practice of audiologists and its relationship to other health or allied health professions.
2. Administer a case history, otoscopy, immitance, pure tone air/bone conduction, speech recognition, PI function/word recognition, MCL, UCL, SNR and electrophysiological tests in the audiology clinic.
3. Interpret and apply audiological data to various communication disorders and auditory pathologies.
4. Compose comprehensive audiological reports including the background information, audiological assessment procedures and recommendations.
5. Describe appropriate procedures for assessing hearing and preventing hearing loss in children and adults.

CSD 442 Audiologic Rehabilitation
Effects of hearing loss on language and communication for children and adults. Interpretation of audiological results. Rehabilitation strategies. Audiogram interpretation and intervention planning.
3 Cr. Spring

Student Learning Outcomes
1. Compare and contrast the role of the audiologist and speech language pathologist in audiologic rehabilitation.
2. Interpret and summarize the candidacy guidelines for pediatric and adult cochlear implantation in the United States.
3. Use auditory skills hierarchy to generate measurable goals and objectives for clients with hearing loss across the lifespan.
4. Identify typical language and speech characteristics of adults and children who have hearing loss.
5. Outline various communication modalities used by adults and children with hearing loss.

CSD 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

CSD 450 Clinical Methods and Procedures
Clinical methods and procedures applicable to assessment and intervention strategies in speech-language pathology and audiology.
Prereq.: CSD 434 3 Cr. Fall

CSD 452 Practicum I
Supervised training in speech-language and hearing therapy techniques.
Prereq.: CSD 434, CSD 450 3 Cr. Fall | Spring

Student Learning Outcomes
1. Select appropriate tests/subtests or activities to assess the communicative behaviors of their assigned client. (Std IV G 1a-1d).
2. Analyze test results, synthesize and integrate the data. (Std IV G 1e -1g).
3. Based on assessment information, students will plan a semester-long treatment plan and make necessary referrals if indicated. (Std IV G - 2a, 2g).
4. Select appropriate evidence based treatment techniques and implement them to address the client's problems and make necessary changes to plans when indicated. (Std IV G 2b, 2c, 2e).
5. Select and write measurable long-term and short-term goals. (Std IV G 2a).
6. Document client performance and progress during every session and write outcomes or SOAP notes for each session. (IV G 2d, 2f).
7. Write professional reports Semester Treatment Plan & Semester Summary (or Discharge) Report.
8. Follow professional ethical standards; communicate effectively with clients, their families, and other professionals; provide appropriate counseling and guidance about the communication disorder and the treatment to clients and their families. (Std IV G 3a 3d).
9. Self evaluate their clinic sessions and discuss strengths and areas for growth.

CSD 453 Practicum II
Supervised training in speech-language and hearing therapy techniques.
Prereq.: CSD 452 3 Cr. Fall | Spring

CSD 457 Clinical Practice Settings
Operating procedures of the communication disorders professional in a variety of work settings; federal and state legislation; organizing and

evaluating programs.
Prereq.: CSD 130 3 Cr. Spring

CSD 460 Language Development

Language concepts, theory, and terminology. Basic principles and parameters of normal language development. Covers prelinguistic, phonological, morphological, syntactic, semantic, and pragmatic areas.
Prereq.: ENGL 361 3 Cr. Fall

Student Learning Outcomes

1. Define language & describe its components/parameters.
2. Differentiate among language development theories and explain language development according to each.
3. Explain the relationship between cognition and language.
4. Examine patterns of prelinguistic & linguistic behavior in young children.
5. Examine the progression of typical language development in morphology/syntax, semantics, and pragmatics.
6. Collect & transcribe a language sample, and calculate mean length of utterance.
7. Organize and analyze a language sample in the areas of morphology/syntax, semantics, and pragmatics.
8. Integrate knowledge of the complexities of language & analyze the language development of a young child.

CSD 461 Language Disorders: Assessment and Intervention

Description of common language disorders. Strategies for assessing linguistic knowledge and usage. Intervention procedures for the remediation of language disorders.
Prereq.: CSD 460-560 3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the framework of assessment and intervention in language disorders. These include: definitions, models, history, issues.
2. Discuss general principles in assessment and intervention. These include: clinical teaching cycle, sequencing, evidence-based practice.
3. Learn the components & sequence of assessment at different developmental levels + prelinguistic, emerging language, and developing language levels.
4. Distinguish between different testing methods.
5. Accurately administer and score a language test.
6. Describe various language sampling procedures & analyze a language sample.
7. Describe the language characteristics of various etiological groups.
8. Distinguish between language differences and language disorders.
9. Perform basic assessment of prelinguistic behaviors in young, nonverbal children.
10. Learn the components of intervention for different ages + prelinguistic, emerging language, developing language.

CSD 465 Clinical Practice in the School

Supervised experience in assisting and managing the speech, language, and hearing problems of school-aged children. Must be taken following the completion of all other courses in the major.
6 Cr. Fall | Spring

CSD 466 Augmentative Communication Systems

Non-vocal communication techniques for non-speaking persons. Determining the most appropriate augmentative communication system for a particular client and teaching him/her how to use it.
2 Cr. Fall

Student Learning Outcomes

1. Describe the AAC terminology that is used in the field of Communication Sciences and Disorders.
2. List and describe augmentative and alternative communication systems.
3. Identify the parameters involved in assessment and selection of AAC devices.

CSD 468 Child Language Development and Disorders

Language development from birth through adolescence emphasizing content and processes. Recognition of language differences and deficits and suggestions for teaching language skills to the preschool and elementary child. Not open to CSD majors.
3 Cr. Fall | Spring

Student Learning Outcomes

1. "Define the term ""language"" and describe the components of language & the parameters within each: 1. Form - phonology, morphology, syntax; 2. Content - semantics, and 3. Use - pragmatics)."
2. Differentiate among language, speech, and communication.
3. Outline the sequence of language acquisition in each language parameter and to list major language

milestones.
4. Describe factors affecting normal language acquisition, including child cognition and roles of significant adults, television & other media, and cultural background.
5. Describe different types of language disorders and their impact on learning.
6. Explain basic language assessment procedures for children.
7. Use language stimulation techniques and other basic language teaching strategies with children.
8. Describe the cooperative role of professional staff in the remediation of language disorders.
9. Analyze language samples to determine the patterns of language development and disorders.
10. Describe patterns of language variation (differences) versus language disorders for those who speak another language or dialect as their first language/dialect.

CSD 469 Autism Support Strategies and Interventions

Characteristics of Autism Spectrum Disorders (ASD) impacting communication. Strategies and interventions to improve social-communication and behaviors for children with ASD.
Prereq.: CSD 460 or CSD 468 Coreq.: CSD 460 2 Cr. DEMAND

Student Learning Outcomes

1. Analyze the range of developmental social communication, language, and emotional regulation skills among individuals with autism spectrum disorders (ASD).
2. Integrate social communication with emotional regulation behaviors of children with ASD, from nonverbal to verbal and conversational stages of communication.
3. Apply interpersonal and learning support strategies commonly used with individuals with ASD to address social communication, language, and emotional regulation needs.
4. Assess the quality of evidence of a variety of intervention strategies used with this population.

Communication Studies (CMST)

CMST 171 Speech Anxiety Reduction

Knowledge and skills to help individuals who feel uneasy, anxious or stressed in public or presentational speaking.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Explain the meaning, contexts, causes, occurrence, and possible lifetime effects (academic, social, career) of communication apprehension.
2. Measure their own level of communication apprehension.
3. Create a multidimensional, individualized plan for treating communication apprehension, including deep breathing, cognitive restructuring, systematic desensitization, visualization, physical exercise, interpersonal support, and skills training.
4. Track the progress of reducing speech anxiety.

CMST 192 Introduction to Communication Studies

Interpersonal communication, small group communication and public speaking. Theory and experience to relate meaningfully, think critically, organize clearly, and speak and listen effectively.
3 Cr. Fall | Spring | Summer GOAL AREA 1: COMMUNICATE ORALLY & IN WRITING

CMST 200 Gateway to Communication Studies

Introduces the discipline, professional journals, key communication competencies, careers in communication, academic expectations.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the historical evolution of the study of communication.
2. Describe nationally established (NCA) key competencies in speaking and listening.
3. Identify careers in communication.
4. Describe options in the CMST program.
5. Complete major/minor application.

CMST 202 Special Topics in Communication Studies

Investigation and application of one or more communication theories, models, or skills.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Students will describe a communication theory, model, or skill.
2. Students will apply a communication theory, model, or skills to specific communication situations.
3. Students will evaluate their application of the communication theory, model, or skill to specific communication situations.

CMST 210 Performance and Everyday Life

Performance acts embedded in our everyday world show how performance is used to learn about culture, reflect on experience, and act upon the world and self.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

CMST 211 Public Speaking
Theory and practice of public speaking. Introduction to the criticism of public speeches.
3 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS

CMST 220 Interpersonal Communication
Theory and practice of communication in relationships.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

CMST 229 Effective Listening
Theory and practice related to listening skills in a variety of communication settings.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze their own attitudes toward and improve their skills in listening.
2. Articulate the significant role and process of listening in communication.
3. Be able to listen more effectively for various purposes (e.g. discriminative, comprehensive, therapeutic, appreciative, critical, contemplative).
4. Be able to identify listening barriers and biases.

CMST 240 Communication in Interviews
Theory and practice of communication skills relevant to interview settings. Interviewer and interviewee responsibilities.
3 Cr. Spring

Student Learning Outcomes
1. Distinguish between the role and responsibilities of the interviewer and interviewee.
2. Construct different types of interviews (eg. selection, performance appraisal, discipline, non professional counseling, survey, journalistic, sales, etc.) based on the needs of the situation.
3. Design interview protocols that utilize strategic approaches to question formatting and sequencing.
4. Prepare thoughtful and appropriate responses with a specific interview scenario in mind.
5. Select and employ nonverbal and verbal choices which seek to optimize their perceived credibility and chances for success in the interview situation.

CMST 291 Speech Activities
Participation in Forensics and/or Performance of Literature co-curricular activities. May be repeated for a total of 4 credits.
Prereq.: Permission of instructor 1 Cr. Fall | Spring

Student Learning Outcomes
1. Prepare performances and communication experiences for various audiences.
2. Deliver oral performances and communication experiences utilizing effective verbal and nonverbal communication.
3. Evaluate own and others' performances and communication experiences for effectiveness.

CMST 300 Introduction to Theories of Communication
Historical and contemporary human communication theories. Applying theories in a communication context.
Prereq.: CMST 200, CMST 210 or CMST 211, CMST 220 or CMST 340 3 Cr. Fall | Spring

CMST 301 Ethics in Human Communication
Ethical issues in public and private human communication.
Prereq.: CMST 200, CMST 210 or CMST 211, CMST 220 or CMST 340 3 Cr. Fall | Spring

CMST 302 Special Topics in Communication Studies
A theoretical or applied communication studies topic. May be repeated to a maximum of 9 credits.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Explain a communication theory and/or model.
2. Apply a communication theory and/or model as it pertains to specific communication situations.
3. Evaluate a communication theory and/or model as it pertains to specific communication situations.
4. Compare and contrast communication theories and/or models as they pertain to specific communication situations.

CMST 306 Rhetoric in Popular Culture
Rhetorical influences of popular culture; critical interpretation and analysis of print, digital, and visual texts; multi-media technologies; and organizational systems.

3 Cr. Fall | Spring GOAL AREA 2: CRITICAL REASONING | GOAL AREA 6: HUMANITIES AND FINE ARTS

CMST 310 Performance and Literature

Theory and practice in performance of literature with a focus on analyzing texts for performance; developing and critiquing performances.
3 Cr. Fall | Spring

CMST 313 Political Communication

Communicative actions in political contexts. Political campaigns, presidential communication, social movements, and religious and reform communication.
3 Cr. Even Fall

Student Learning Outcomes

1. Define and discuss orally and in writing essential concepts and terms from assigned readings, lectures, discussions, etc.
2. Identify public discourse produced for the purpose of influencing others.
3. Analyze examples of public discourse using at least three theoretical perspectives, and identify important elements of that discourse that contribute to its effectiveness/ineffectiveness in achieving the goals of the generators of the discourse.
4. Identify cultural assumptions embedded in public discourse, and identify the groups who are helped or hindered by these assumptions.
5. Note the role of technology in shaping public discourse, influencing its distribution to publics, and affecting its outcomes.
6. Locate, retrieve, study and use original texts, scholarly literature, and other relevent materials from libraries, in the construction of a term paper that examines a specific political communication event.
7. Understand and demonstrate elementary techniques of rhetorical criticism.

CMST 314 Freedom of Speech--Rights and Issues

Freedom of speech concept on which the first amendment is based, its application by the Supreme Court to issues in American society.
3 Cr. Odd Fall

Student Learning Outcomes

1. Explain the American tradition of freedom of speech 2. Identify the components of the American judicial system and explain their functions.
3. Identify and explain at least three principles of legal thought/reasoning used in Supreme Court decisions on freedom of speech.
4. Explain the developments in at least two areas of the First Amendment using landmark Supreme Court decisions.
5. Identify and explain at least two controversial issues regarding the First Amendment.
6. Identify and explain qualities of free and responsible communication.
7. Explain the tension between freedom and responsibility in American society.

CMST 316 Speech Writing

Principles of rhetorical style in speech writing, including speech composition theory, model speech analysis, projects, and speech delivery.
Prereq.: CMST 192 or HONS 170 or equivalent, CMST 211 3 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

CMST 318 Argumentation and Advocacy

Construction and critique of reasoned discourse and advocacy.
Prereq.: CMST 192 or HONS 170 or equivalent, CMST 210 or 211 or permission 3 Cr. Fall | Spring GOAL AREA 2: CRITICAL REASONING

CMST 319 Introduction to Rhetorical Theory

Theory and literature of rhetoric from classical to modern times. Nature and scope of rhetoric applies to issues and problems in human affairs.
Prereq.: CMST 200 3 Cr. Fall | Spring

CMST 320 Communication in Families and Intimate Relationships

Communication patterns between individuals involved in ongoing, intimate relationships. Family interactions and related topics such as nonmarital cohabitation and long-distance relationships.
Prereq.: CMST 220 3 Cr. Fall

CMST 321 Communication and Interpersonal Conflict

Theories and methods of managing interpersonal conflict which emphasize collaborative communication.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Students will distinguish between the concepts interests and positions as they relate to conflict situations.
2. Students will explain the role of and identify types

of goals commonly present in conflict interaction.
3. Students will describe and identify a constructive negotiation model and apply it to a conflict scenario.
4. Students will explain the difference between various styles of conflict management.

CMST 324 Gender and Communication

How human communication shapes and is shaped by gender and culture. Techniques to change oppressive feminine and masculine communication strategies.
3 Cr. Spring

CMST 327 Nonverbal Communication

Nonverbal messages in relation to verbal interaction. Influence of context, culture, gender, and relationship in analyzing nonverbal phenomena.
3 Cr. Fall

CMST 330 Intercultural Communication (Diversity)

Application of theories related to communicating with persons from different cultures.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

CMST 338 Communication and Culture: U.S. and World Regions

Cultural and communication patterns in a specific region of the world with comparison to U.S. patterns. Regional focus will vary. May be repeated to 6 credits.
3 Cr. Spring

Student Learning Outcomes

1. Compare cultural perspectives and communication patterns of individuals from the United States to those of other world regions, such as Asia, Africa, Latin America, or Europe, and the impact of these perspectives on intercultural communication.
2. Identify guidelines for appropriate verbal and nonverbal interaction in various contexts (work, family, educational institutions) with individuals from specific world regions, such as Asia, Africa, Latin America or Europe.
3. Explain the important role of religion in particular world cultures under study, and to identify potential religion-based complications in intercultural communication.
4. Compare/contrast characteristics of a competent communicator in the U.S. and other world regions such as Asia, Africa, or Western Europe.
5. Apply communication principles in novel interaction situation using case studies, critical incidents, and simulations.

CMST 339 Problems in Intercultural Communication

Intercultural issues analyzed from Western and non-western perspectives.
3 Cr. Spring

CMST 340 Small Group Communication

Theory and research on small group processes. Participation in and leading of groups.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Recognize systemic processes operating in small groups.
2. Write and speak competently about small group processes using forms of analysis from course readings, activities, and lectures.
3. Examine their own behavior in groups and practice different behaviors, becoming cognizant of group variables that positively and negatively affect group task and interpersonal dimensions.
4. Demonstrate skill in using a variety of rational and intuitive decision-making and problem-solving methods.
5. Describe the importance of issues of gender and cultural diversity as they affect group processes.
6. Describe diverse leadership strategies/approaches which lead to effective small group outcomes.
7. Develop skill in preparing, organizing, implementing, and reporting formal and informal group interactions.
8. Apply principles and concepts of group theory outside the classroom.

CMST 341 Communication in the Workplace

Theoretical understanding of the contemporary workplace as a system of human forces and communication. Interpersonal communication skills for productive worklife. Professional presentations.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and apply communication theories, models and principles that foster effective communication for a business/workplace context.
2. Summarize and investigate the influence of perception and culture on the communication process.
3. Illustrate and interpret competent interpersonal

communication skills for a business/workplace setting.
4. Construct oral and written presentations and messages that are clear, concise, courteous and correct, using currently recognized business/workplace formats.
5. Describe and apply appropriate group communication concepts and/or skills for a business/workplace setting.

CMST 402 Special Topics in Communication Studies

Discussions and readings in advanced speech topics. A specific topic will be listed each time offered. May be repeated to a maximum of 9 credits.
Prereq.: Senior/graduate standing or permission.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Apply communication theories and/or models as they pertain to specific communication situations.
2. Evaluate communication theories and/or models as they pertain to specific communication situations.
3. Compare and contrast communication theories and/or models as they pertain to specific communication situations.

CMST 403 Methods of Inquiry in Communication Studies

A writing intensive study of qualitative, quantitative and critical research methods. This course will fulfill CMST majors' upper division writing requirement.
Prereq.: ENGL 191, admission to CMST major, junior status, 300 completed or taken concurrently. 3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate proficiency in a type of writing task common to the Communication Studies discipline (e.g. literature review, research proposal, critical essay).
2. Locate and retrieve previous research done in the discipline of Communication Studies.
3. Critique published Communication Studies research and evaluate knowledge claims made therein.
4. Identify different methods of research used by communication researchers.
5. Summarize the primary steps in conducting a research study.

CMST 410 Contemporary Issues in Performance Studies

Variable content stressing methods, theories, and subjects in contemporary performance studies, such as performance criticism, performance and gender, performance art, performance and culture, performance of selected literary genres. Specific topics to be announced. May be repeated.
3 Cr. Spring

Student Learning Outcomes

1. To compare cultural perspectives and communication patterns of individuals from the United States to those of other world regions, such as Asia, Africa, Latin America, or Europe, and the impact of these perspectives on intercultural communication.
2. To identify guidelines for appropriate verbal and nonverbal interaction in various contexts (work, family, educational institutions) with individuals from specific world regions, such as Asia, Africa, Latin America or Europe.
3. To explain the important role of religion in particular world cultures under study, and to identify potential religion-based complications in intercultural communication.
4. To compare/contrast characteristics of a competent communicator in the U.S. and other world regions such as: Asia, Africa, or Western Europe.
5. To apply communication principles in novel interaction situation using case studies, critical incidents, and simulations.

CMST 411 Critical Approaches to Public Communication

Rhetorical criticism of public communication and popular culture, such as speeches, news coverage, and entertainment.
Prereq.: CMST 300 or CMST 319 or permission of instructor. 3 Cr. Fall | Spring

Student Learning Outcomes

1. "Define ""rhetoric,"" ""rhetorical theory,"" and ""rhetorical criticism."""" 2. Explain various perspectives toward rhetorical criticism.
3. Evaluate strengths and weaknesses of different critical perspectives.
4. Produce critiques of rhetoric.

CMST 412 Theories of Persuasion

Persuasion theories applied to selected communication contexts.
Prereq.: CMST 300 3 Cr. Fall | Spring

Student Learning Outcomes
1. Explain selected theories of persuasion.
2. Evaluate selected theories of persuasion.
3. Apply selected theories of persuasion to various communication contexts.
4. Identify ethical issues in persuasive communication.

CMST 420 Advanced Seminar in Relational Communication
Topics concerning the interaction between communicative practices and the construction and evolution of relationships and communities. May be repeated up to 9 credits.
Prereq.: CMST 220 or permission of instructor 3 Cr. Fall | Spring

Student Learning Outcomes
1. Explain how communication functions to develop personal relationships.
2. Explain how communication functions to maintain personal relationships.
3. Explain how communication functions to transform personal relationships.
4. Demonstrate a familiarity with interpersonal communication theory.
5. Demonstrate a familiarity with interpersonal communication research.

CMST 428 Theory and Practice of Mediation
Theory and practice of mediation and conflict management.
Prereq.: CMST 321 3 Cr. Fall

Student Learning Outcomes
1. Demonstrate understanding of the theory of mediation.
2. Conduct a mediation between two conflicting parties.
3. Demonstrate understanding of the Minnesota statutes and legal rules pertaining to mediation.

CMST 429 Theories of Third Party Intervention
Theory and practice of third party intervention into interpersonal conflict.
Prereq.: CMST 428/528 3 Cr. Spring

Student Learning Outcomes
1. Design a dispute resolution intervention for a given interpersonal conflict.
2. Demonstrate understanding of several third party intervention practices.
3. Explain the role of communication in third party intervention into interpersonal conflict.

CMST 439 Intercultural Communication for the Global Workplace
Theories and principles of intercultural communication applied toward working effectively in international contexts. Cultural synergy in global work contexts. Major intercultural communication challenges for service abroad.
Prereq.: CMST 330 3 Cr. Fall

CMST 441 Organizational Communication
Nature and flow of communication in modern organizations through applied theory, diagnosis and problem-solving skills.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Compare and contrast traditional, interpretive and critical-interpretive perspectives of the study of organizational communication.
2. Identify and describe at least 2 theoretical approaches from each of these perspectives.
3. "Apply organizational communication theories and concepts to analyze and provide recommendations for solving organizational problems in ""real"" organizations." 4. Identify and explain 3 contemporary communication issues in modern organizations (e.g., socialization, emotionality, diversity, etc.).

CMST 444 Communication Internship
Department approved and directed field experience with an approved agency. For Communciation Studies majors and minors only. By permission only.
Prereq.: CMST 341 or CMST 441; completion of all of the minor or half of the major; and junior or senior standing. Coreq.: 6-16 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify and apply a minimum of 5 communication skills from those skills negotiated in the student's learning agreement.
2. Analyze communication at the internship site using a minimum of 10 communications concepts/theories from those concepts/theories negotiated in the student's learning agreement.
3. Identify and perform the appropriate communication standards of professional behavior as assessed by the site supervisor in collaboration with the internship director.
4. Perform goal setting, reflection, and problem

solving.
5. Identify at least 3 areas of persona and/or professional growth that resulted from the internship experience.

CMST 448 Communication and Contemporary Leadership

Education for reflective leadership is provided from the perspective of communication and rhetorical theory. Theoretical concepts of leadership and followership are examined along with skill development, research and critique.
Prereq.: 45 or more credits 3 Cr. Fall

CMST 452 Teaching Communication Studies

Materials and methods for curricular and co-curricular teaching in the secondary schools. Course is designed for students completing the Communication Arts and Literature teaching major.
Prereq.: 12 credits of CMST beyond 192 3 Cr. Spring

Student Learning Outcomes

1. Explain the primary focus of curriculum standards at the state and national level.
2. Create a teaching unit on a communication topic complete with lesson plans and communication activities, demonstrating an understanding of the basic components of a lesson plan.
3. Identify and select professional resources useful to the teacher of communication, i.e., journals, websites, curriculum guides, NCA publications, professional associations, etc.
4. Describe student-centered and teacher-centered instructional strategies, demonstrating how each function in the communication classroom.
5. Demonstrate an understanding of how to assess and report student achievement in the communication classroom.
6. Explain strategies for maintaining and enhancing professional expertise, i.e., national and state professional organization membership, post-graduate programs, and research activity, etc.
7. Create lesson plans to address the needs of diverse learners by reflecting sensitivity to gender, racial, ethnic, and other forms of discrimination.

CMST 453 Teaching Communication in Grades 5-8

Materials and methods for curricular and co-curricular teaching communication in the middle grades. Focus on content and communication pedagogy. For elementary education students desiring middle school endorsement in Communication Arts and Literature.
Prereq.: CMST 192 or HONS 170 or equivalent, ED 200 or ED 300 3 Cr. Fall | Spring

Student Learning Outcomes

1. Explain the primary focus of curriculum standards at the state and national level.
2. Create curricular materials in communication that reflect understanding of a variety of communication concepts.
3. Apply communication skills and pedagogy appropriate to the middle school.
4. Create a teaching portfolio complete with lesson plans and communication activities, demonstrating an understanding of the basic components of a lesson plan.

CMST 455 Communication Arts and Literature Practicum and Field Experience

Practicum and field experience for Communication Arts and Literature majors.
Prereq.: Admitted to Teacher Education; completed ED 300. Coreq.: Concurrent enrollment in ED 421 and ED 431 3 Cr. Fall | Spring

Student Learning Outcomes

1. Students will learn, observe, and analyze the culture of the school and classroom in which they are participating.
2. Students will demonstrate knowledge, skills and dispositions needed to create safe, respectful, democratic cultures and learning communities in the classroom through participation in 5-12 classrooms.
3. Students will apply communication and relationship building strategies with students, peers, school employees, and parents/community members to an actual field experience.
4. Students will implement beginning levels of inclusive and equitable curriculum, assessment, and instruction based on diverse learner needs.
5. Students will apply language development, literacy knowledge, and skills in their content area through participation in a 5-12 classroom 6. Students will apply interdisciplinary curriculum development and team teaching where possible in the field experience.
7. Students will demonstrate knowledge of reflecting on their teaching experiences.
8. Students will apply appropriate academic language to the microteaching experience.

CMST 460 Health Communication

Communication theory and practice in health care contexts.
Coreq.: Cr. Spring

Student Learning Outcomes
1. Analyze the dimensions of communication theory, process and practice that are specific to health care contexts.
2. Describe critical roles that communication plays in various and diverse health care contexts.
3. Identify cultural differences and language barriers facing minority or marginalized populations as they affect communication between clients and providers.
4. Evaluate ethical dimensions and communication responsibilities inherent in all health care contexts.
5. Evaluate the communication exigencies and dimensions of current health care issues including changing populations and world-wide health issues.
6. Apply interpersonal communication skills related to health care interactions.

CMST 461 Current Trends in Health Communication

Discussion of communication topics related to specific health care contexts featuring a variety of speakers from the local health care community.
Coreq.: Cr. Fall

Student Learning Outcomes
1. Identify and analyze challenges to communicating in each of the health care contexts identified in the course.
2. Develop and evaluate solutions for each of the challenges identified for the health care contexts identified in the course.

CMST 491 Undergraduate Assistantship

Assisting in a 100/200 level course in Communication Studies. May be repeated to a maximum of 9 credits.
Prereq.: B average or above for all courses in CMST. Approval of instructor and chairperson one semester in advance of registration 3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply characteristics of effective peer tutoring, which include skills in discussion leadership, critical thinking, collaboration, cooperation, and problem solving.
2. Assist students in learning communication concepts and skills relevant to the course for which they are a teaching assistant.
3. Assess communication concepts and skills in the communication contexts relevant to the course for which they are a teaching assistant.
4. Explore, analyze, and reflect on their communication choices and options in their role as a teaching assistant.

CMST 492 PSI Teaching Assistantship

Assisting in one of the PSI (Personalized system of Instruction) sections of CMST 192, including peer tutoring, organizing records, and assessment. May be repeated to a maximum of 9 credits; maximum of 3 credits applying to any CMST major or minor.
Prereq.: TA application. Permission of instructor
Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply characteristics of effective peer tutoring, which include skills in discussion leadership, critical thinking, collaboration, cooperation, and problem-solving.
2. Use specific strategies for assisting students in composing and delivering public speeches.
3. Assist students in learning communication concepts and skills.
4. Create, organize, and maintain accurate records of student course progress and grades.
5. Assess communication skills in the following contexts: interpersonal, small group, and public speaking.
6. Explore, analyze, and reflect on communication choices and options in role as a TA.
7. Articulate the characteristics of an ethical communicator.

Community Psychology (CPSY)

CPSY 101 Applying Psychology

(Same as CEEP 101) Applications of psychological principles to self and society as used in specialty areas. Overview of personal growth issues (e.g. stress, relationships, and careers).
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

CPSY 102 Applying Psychology Lab

(Same as CEEP 102) Exploration of personal growth and adjustment and application of processes for promoting personal change.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Analyze the role of one's culture and context in the process of identity development.
2. Analyze and describe your own personal growth.
3. Interpret the dynamics of change in your life.
4. Describe the environmental/contextual influences shaping identity.

CPSY 125 Career Planning Seminar
Consideration of careers in light of students' interests and values.
Coreq.: 1-3 Cr. DEMAND

CPSY 135 Developing Effective Relationships with Children
Behavioral techniques in working with children.
3 Cr. DEMAND

CPSY 235 Addictive Behaviors
Acquisition, maintenance, and treatment of addictive behaviors from a psychological and biological perspective. Alcoholism and other drug addiction, eating disorders, compulsive gambling, workaholism, dependent relationships, and sexual addiction.
Prereq.: CPSY 101 3 Cr. DEMAND

CPSY 262 Human Growth and Development
A life-span approach to growth and development; physical, intellectual, emotional, and social phases as related to total growth.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

CPSY 280 Brain and Behavior
Structure of the brain and nervous system and how the brain impacts behavior. Emphasis on applications to learning, behavior, addiction, and mental health.
Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Describe the structure of the brain and nervous system.
2. Explain the role of the brain in governing behavior.
3. Apply neuropsychological principles to disorders of behavior and addiction.
4. Evaluate methods of treating neuropsychological disorders.

CPSY 323 Introduction to Counseling Theory and Practice
Client-centered, family systems, psychoanalytic, and cognitive/behavioral counseling approaches, non-western methods of healing. The limits of these approaches. Roles that differences in values, culture, ethnicity, and gender play in the helping relationship. Developing a personal theory of helping in the context of current psychological theories and understanding of students' own personal world views.
Prereq.: CEEP 101 or CPSY 101 Coreq.: CPSY 324 3 Cr. Fall | Spring | Summer

CPSY 324 Introduction to Counseling Theory and Practice Lab
Basic concepts that apply to the helping professions. The helping skills necessary to work with individuals and families.
Prereq.: CEEP 101 or CPSY 101 Coreq.: CPSY 323 1 Cr. Fall | Spring | Summer

CPSY 325 Helping Skills
Principles and theories of individual interviewing and group processes. Knowledge of clients and human service situations through observation, role playing and coached clients.
Prereq.: CPSY 102, CPSY 323, CPSY 324 3 Cr. Fall | Spring | Summer

CPSY 326 Field Work
Special arrangement with supervising professor, department chairperson, and field supervisor.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Apply knowledge of community psychology helping skills in community settings.
2. Analyze their own helping skills in the context of their service in the community.
3. Analyze the process and structure of the agency in which they serve.
4. Apply cultural diversity skills in their service learning work.

CPSY 327 Group Process and Practice
Group dynamics including management and facilitation of groups in psychological settings.
Prereq.: CPSY 325 3 Cr. Fall | Spring

Student Learning Outcomes
1. Describe history, theory, and trends in counseling and their application to a helping relationship.
2. Define and describe group process variables.
3. Integrate knowledge of the dynamics of a group

process through experience as a group participant and/or leader.

CPSY 330 Principles of Behavior

An introduction to behavior principles with emphasis on the experimental and applied analysis of behavior.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify basic principles and procedures of behavior modification.
2. Identify examples of how behavioral principles operate in everyday life.
3. Describe procedures for assessing, recording, and graphing behavior.
4. Describe basic behavioral research designs.
5. Describe typical behavior therapy treatments with common clinical problems.
6. Discuss ethical issues related to use of behavior modification.
7. Describe major historical developments in behavior analysis.
8. Discuss professional organizations and career opportunities in behavior analysis.

CPSY 331 Hypnosis and Related Psychological Phenomenon

Hypnotic and related psychological phenomena: peak experiences, psychedelic experiences, transcendental experiences, mystical experiences, etc.
3 Cr. DEMAND

CPSY 361 Introduction to Educational Psychology

Psychological theories, principles, and research applied to the educational settings, including measurement, standardized tests, instrument construction, and evaluation and assessment of student learning.
Prereq.: CPSY 262 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Justify the importance of theory and research on teaching and learning to classroom applications of effective instruction.
2. Implement a balance of reflective, effective teaching methodologies and science in approaches to educating students.
3. Compare and contrast behaviorist, cognitive, and constructivist theories of learning and effective classroom practices derived from each theory.
4. Select from and apply theoretically derived research based practices to classroom instruction techniques.
5. Describe cognitive, personal, social and emotional theories of development and their implications for teaching relative to student needs and classroom practice.
6. Implement appropriate strategies to address variations in student abilities, learning difficulties, culture, gender and SES.
7. Describe and apply models of motivation to enhance student learning and achievement.
8. Explain how teaching methods, grouping arrangements, learner variables and instruction content may be integrated for effective learning.
9. Develop a model for assessing student learning using basic psychometric principles, a means of evaluating student responses to this assessment and a means of using the assessment data to improve student learning.
10. Interpret standardized test results and communicate results to parents and students.

CPSY 362 Educational Measurement and Test Construction

(Same as CEEP) Principles of measurement, interpretation of standardized tests, construction of teacher-made achievement tests, evaluating and grading outcomes of learning.
Prereq.: EDR 262 3 Cr. DEMAND

CPSY 384 Individual and Group Differences

(Same as CEEP) The nature, extent, and causes of individual and group differences; the methodological problems of measuring human differences.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the conceptual framework for the study of inter-group relations (culture, individual and institutions) used to examine human differences.
2. Conduct social psychological levels of analysis relative to issues in the lives of individuals.
3. Differentiate between first and second order change and organize second order change interventions.
4. Critically evaluate the effectiveness of interventions.
5. Discuss how individual attitudes and interpersonal relations affect human interactions.
6. Utilize communication and conflict resolution skills as it relates to discussing sensitive topics.
7. Participate in-group discussions by listening, speaking and responding to the discussion content

and participating in classroom learning activities.
8. "Define key terms and answer the question, ""why do we need to understand diversity?"", based on research data and contextual consideration of the issues." 9. Describe the cultural/historical foundations of oppression in the United States.
10. Critically examine current social issues and their impact on inter-group relations.

CPSY 402 Professional Issues in Addiction

Screening, assessment, treatment planning, case management, crisis intervention, client and community education, professional and ethical responsibilities in addictions treatment. Graduate level project required.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Apply the concepts of screening, assessment, treatment planning, case management and crisis intervention as demonstrated by completion of client file activity.
2. Demonstrate curriculum development in psych-education groups.

CPSY 404 Adult Children of Alcoholic and Other Dysfunctional Families

Adults from dysfunctional families of origin, especially alcoholic; assessment and treatment; healthy adult and family system functioning vs. unhealthy patterns.
3 Cr. DEMAND

CPSY 419 Professional and Scientific Ethics in Psychology

Ethical standards for psychologists as set by national and state associations, organizations, agencies, courts, and legislative bodies. Enrollment is limited to seniors and to others by permission of instructor.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Understand concepts related to legal and ethical issues in human services including: a. Federal, state, agency, and professional codes of ethics; b. Professional standards and scope of practice; c. The consequences for violating code of ethics; d. Process used to address alleged ethical violations; e. Understand the sensitivity of ethical concerns in working with diverse cultures.
2. Develop skills related to legal and ethical issues in human services including: Ability to identify ethical issues in written case studies and demonstration of ethical and professional behavior in written work.
3. Demonstrate attitudes consistent with ethical and legal codes in human services including: Willingness to assess and adjust personal behaviors and attitudes that may conflict with professional guidelines and respect for professional standards.

CPSY 428 Psychodynamics of the Family Relationships

(Same as CEEP) Psychological interrelationship during developmental stages of life and role of the community psychologist. Focus on family as a system, the family life cycle and the dynamics of family relationships. Provides solid foundation for individual decisions in partner selection, interactions in committed relationships, and parenting.
3 Cr. Spring

Student Learning Outcomes

1. To know basic terminology and concepts of family relationship.
2. To understand ways that history, society and culture interact with families.
3. To demonstrate an understanding of how various social and behavioral sciences look at families.
4. To be able to apply concepts to concrete family relationships, including your own.

CPSY 430 Seminar

(Same as CEEP 430) Selected topic in psychology. May be repeated to a maximum of 12 credits.
3 Cr. DEMAND

CPSY 432 Instrumentation: Laboratory Equipment

Psychological laboratory equipment including electromechanical and solid-state control, interface, environmental, and data-recording devices.
3 Cr. DEMAND

CPSY 433 Applied Behavior Analysis I

Behavior analysis in applied settings. Design, implementation, and evaluation of behavior analysis procedures.
Prereq.: CPSY 330 3 Cr. Fall | Spring

Student Learning Outcomes

1. State the underlying assumptions of behavior analysis.
2. Define and provide examples of key behavior analytic terms and principles.
3. Define and demonstrate the understanding of direct-acting and indirect-acting behavioral contingencies and their daily applications.

4. Describe and demonstrate procedures used to establish experimental control and reliability.
5. Explain the functional approach to treatment and clinical applications.
6. Use the dimensions of applied behavior analysis to determine whether interventions are behavior analytic.
7. Describe and provide examples of respondent and operant conditioning models.

CPSY 434 Applied Behavior Analysis II

Advanced applied behavior analysis techniques. Design, assessment, and evaluation of behavior change procedures. Current issues.
Prereq.: CPSY 330, CPSY 433-533 3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe principles and procedures of applied behavior analysis.
2. Describe and evaluate research on behavioral interventions for a variety of areas (e.g., health problems, substance abuse, dementia, autism spectrum disorders, education, environment).
3. Write a behavior treatment plan based on results of behavioral research.
4. Evaluate ethical issues related to effective behavioral assessment and intervention.

CPSY 436 Behavioral Supports

Behavior analytic supports and systems. Current techniques and research, clinical applications, ethics and future directions.
3 Cr. DEMAND

CPSY 437 Foundations of Addictions

Overview of alcohol and drug counseling focusing on the transdisciplinary foundations of addiction counseling and providing an understanding of addiction theories, the continuum of care and the process of change. Graduate level project required.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Review the history of the addiction field in the United States.
2. Analyze treatment perspectives including the disease concept, psychoanalytic, behavioral and family systems models.

CPSY 438 Addictions Counseling with Selected Populations

Effects of chemical use, abuse, addictions and dependency. Evidence based consultation and chemical dependency counseling with adolescents, women, elderly, Native Americans and other culturally diverse populations. Graduate project required.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Evaluate the prevalence of chemical dependency in differing populations.
2. Examine personal cultural beliefs, values and biases.
3. Discuss treatment, recovery and problems in treating chemical dependency in various populations.

CPSY 439 Diagnosis, Intervention and Treatment of Addictions

Screening, intake, assessment, diagnosis, intervention, treatment planning, outcomes, reporting and documentation.
Prereq.: CPSY 437/537 4 Cr. Fall | Spring

Student Learning Outcomes

1. Review relevant treatment models.
2. Review current assessment techniques in the chemical dependency field.

CPSY 440 Multicultural Perspectives in the Human Services

Cultural values and world views in counseling.
3 Cr. DEMAND

CPSY 441 Experimental Analysis of Behavior

Basic behavioral processes, principles, and theories describing behavior patterns. Quantitative analysis of behavior, experimental preparations, and basic behavior measurement.
3 Cr. Fall

CPSY 444 Internship

Arranged by contract with field supervisor, college supervisor, and student; should be established semester prior to experience. Credits awarded are determined by clock hours involved.
Coreq.: 6-12 Cr. Fall | Spring | Summer

CPSY 445 Chemical Dependency Internship

Supervised chemical dependency clinical experience. Can be repeated up to 12 credits.
Coreq.: 3-12 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Demonstrate the ability to assess substance abuse disorders using current diagnostic criteria.
2. Analyze different treatment techniques as applied to clients in a treatment setting.

CPSY 446 C/D Internship
Arranged by contract with field supervisor, college supervisor, and students in Chemical Dependency Program. Should be established semester prior to experience. Credits awarded are determined by clock hours involved.
Prereq.: CPSY 445 Coreq.: 12 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Demonstrate the ability to assess substance abuse disorders using current diagnostic criteria.
2. Analyze different treatment techniques as applied to clients in a treatment setting.

CPSY 484 Psychopharmacology and Addictions
Pharmacology and dynamics of addictions, effects of drugs on behavior, emotion and cognition. Prescription and recreational drug overview. Graduate level project required.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Report on the neuro-behavioral mechanisms of drugs and impact on behavior.
2. Describe the routes of drug administration, absorption, and metabolism.

CPSY 498 Psychology Teaching Practicum
(Same as CEEP 498) Supervised training and practical experience in applying instructional techniques in educational settings. 1-3 credits per semester; practical experience of course may be repeated once for two additional credits. Instructor permission required.
Coreq.: 1-3 Cr. Fall | Spring

Community Studies (CMTY)

CMTY 222 Diversity in the American Experience (Diversity)
Interdisciplinary exploration of selected aspects of the culture and experiences of women and minority groups within the U.S. Focus on developing a theoretical and practical understanding of the concept of diversity as it relates to the American experience.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

CMTY 266 Community in America
The historical, philosophical, and cultural development of communities in the U.S. Analysis of the impact that race, ethnicity, gender, and class have on communities.
3 Cr. Fall | Spring

CMTY 367 Housing Policies and Programs
Theoretical and practical issues regarding housing policies and programs in the United States.
3 Cr. Fall

Student Learning Outcomes
1. Identify, describe, discuss, and review the various eras in the development of housing policy in the United States.
2. Identify, describe, and discuss housing policies and housing-related issues and trends in the local, regional, and national context.
3. Explain and demonstrate housing+s relation to and contribution to community and economic development, and growth.
4. Analyze and assess the local and regional housing situation and prescribe appropriate course of action.
5. Classify, analyze, and evaluate federal, state, and local housing programs, policies, and initiatives, and organizations aimed at facilitating the development of housing, income integration, housing mobility, and housing affordability.

CMTY 369 Transportation Planning in Communities
Multi modal transportation systems (pedestrians, bicycles, automobiles, and mass transit), community impacts (traffic congestion, environmental, energy, economic, social, safety, parking) benefits, and strategies.
3 Cr. Spring

Student Learning Outcomes
1. Identify, discuss, and describe the main transportation policies and their influence in shaping urban/metro environments.
2. Discuss and analyze the transportation planning process for urban/metro environments.
3. Describe and discuss the economic and financial aspects of transportation.
4. Analyze and forecast travel demand for a given urban area.
5. Evaluate environmental impacts of transportation

in lieu of sustainable transportation development and sustainable urban environments.
6. Explain the social and environmental justice issues in transportation.
7. Analyze the relationship between transportation, land use, and planning.

CMTY 394 Urban Planning

Theory, objectives, and methods of the planning process, particularly in the United States.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the key forces responsible for urban development in the U.S.
2. Analyze current legal issues in planning.
3. Explain how tools available to the professional planner can use used to achieve desired outcomes.
4. Compare and contrast the major subfields of planning (such as transportation, economic development, environmental, etc.) and discuss their contribution to the development of cities.

CMTY 422 Land Use Planning and Zoning

Basic and advanced tools, applications, and frameworks of contemporary land use planning and zoning in the United States.
3 Cr. Fall

Student Learning Outcomes

1. Examine the history of public land use control mechanisms, particularly zoning.
2. Distinguish between the different types of institutions involved in the planning process.
3. Identify the main shortcomings of conventional land use planning.
4. Examine land use policies in relation to the market, and the institutional and social context in which they intervene, and how to enable better and more just patterns of urban development and growth.
5. Evaluate the value of various innovations in contemporary land use planning practice.

CMTY 428 Site Planning and Development

Processes and tools for site planning, preparation, development, and implementation.
3 Cr. Spring

Student Learning Outcomes

1. Distinguish between the different types of relevant laws, rules and regulations governing site project approvals.
2. Evaluate natural site conditions and ecosystems (e.g., slopes, soils, and climate).
3. Evaluate the capability of the site and the existing infrastructure to support project's program requirements.
4. Identify restrictions and opportunities of the site.
5. Formulate a concept project for a site based on user's needs and capability of the site and existing infrastructure to support the program requirements.
6. Students will be able to discuss and analyze alternatives for the implementation of a site project.

CMTY 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

CMTY 450 Community Heritage

American shaped environment from colonial period until present. Will focus on meanings of prototypical building forms and analyze key roles a community's shaped environment can play in healthy community development.
3 Cr. Fall

Student Learning Outcomes

1. Be able to discuss and describe the survey of, and other major issues in the field of historic preservation and heritage studies in United States, as well as, some discussion of world heritage sites and international perspectives.
2. Be able to identify, describe, and explain the urban planning techniques used for preserving historic buildings, neighborhoods and districts, as well as, some of the landmark legal decisions and legislation that have shaped heritage preservation practice in the U.S.A.

CMTY 451 Community Design

Will examine meaning of design, forces affecting quality of natural and built environments, basic design elements and role of design professional.
3 Cr. Spring

Student Learning Outcomes

1. Be able to describe the physical design of cities, towns, and neighborhoods as a component of community development practice.
2. Be able to discuss, describe, and explain the relationships between community design, social

justice, and sustainability.
3. Develop basic visual literacy, including graphic communication skills, visual analysis, and a design vocabulary.
4. Be able to recognize and describe the dominant spatial forms in the U.S., and develop visual, written, and oral communication that helps to explain sustainable forms to a public audience.

CMTY 452 Environmental Planning

Theory, tools, principles and techniques, policy, regulation, and socio/economic impacts on communities emphasizing sustainable development, land use, economic growth, transportation, and environmental impact and mitigation issues.
3 Cr. Fall

Student Learning Outcomes

1. Identify, recite, explain, and discuss major theoretical concepts, policies, and laws pertaining to environmental planning.
2. Explain current environmental challenges as connected to economic growth, land use, transportation, and waste management issues impacting communities.
3. Collect, analyze, and interpret environmental data.
4. Evaluate and synthesize current information and apply it to appropriate planning and policy decision-making related to Sustainable Planning and Development.

CMTY 454 Regional Planning

Comparative regional planning. Economic distribution and ideological differences. Topical.
3 Cr. DEMAND

Student Learning Outcomes

1. Distinguish between the different types of regions utilized for planning purposes.
2. Examine contemporary issues facing regions from the perspective of different socio-economic groups.
3. Formulate contemporary regional economic development proposals.
4. Evaluate alternative regional development plans.

CMTY 455 Grant Development

Raising funds for public or non-profit organizations in Minnesota. Project or program design, budget creation, objective and result delineation and writing for grants from foundations, government and corporations.
3 Cr. Spring

Student Learning Outcomes

1. Conduct research on area and regional nonprofit and public organizations for purposes of identifying them, analyzing/understanding their structure, funding needs, priorities, and funding sources.
2. Develop, write, and submit a complete grant application for a specific nonprofit or public organization.
3. Develop grant objectives and methods, compose project description, and explain need, challenge or opportunity for the grant application to address.
4. Demonstrate understanding of income and revenue concepts to prepare a budget for grant application.
5. Plan and develop evaluation criteria so grant impact can be measured by nonprofits.

CMTY 464 Local Economic Development

Context, theory, process, and practice of local economic development policies for communities.
3 Cr. Spring

Student Learning Outcomes

1. Cite, discuss, compare and contrast the main theoretical perspectives and approaches to local Economic Development.
2. Apply economic development analytic techniques to evaluate changes in local/regional, state and federal industrial sectors.
3. Explain, analyze, and assess, local, regional, and state strategies, sectoral policies, initiatives, and incentives for economic development.
4. Interpret results of economic analysis for the local/regional and state environments and evaluate/prescribe specific actions necessary for economic development and growth.

CMTY 466 Issues in Community Studies

A seminar on a special topic or issue in Community Studies. May be repeated under different topics.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Be able to identify research strategies (both print and online) and conduct research for planning and community development.
2. Be able to research a contemporary issue in planning and community development and describe the impact on people living there.
3. Be able to analyze events or causes leading to a specific issue in planning and community development issue.
4. Be able to evaluate solutions to problems caused

by the specific issue in planning and community development issue(s).

CMTY 493 Internship

Students will be placed on a part-time basis with a public, private, or non-profit organization, participating in research, planning, public meetings, analysis, and decision-making. Majors only; permission required
6 Cr. Fall | Spring

Student Learning Outcomes

1. Gain experience and professional skills in the field of planning and community development.
2. Practice and enhance presentation, writing, public speaking skills, and other transferable skills.
3. Apply, practice, and refine planning tools, techniques, processes, and planning skills.
4. Integrate academic knowledge and theory with professional practice.
5. Create a clear, individualized career development strategy.

CMTY 494 Senior Colloquium

An interdisciplinary senior-level seminar to help students synthesize various concepts, skills, and field experiences. Helps students to create a clear, individualized career development strategy. By permission only.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Synthesize and analyze various planning theoretical concepts, with field experience during the internship period.
2. Review, discuss, analyze and present major theoretical and applied planning theory, practice, and policy related literature and prepare briefing papers.
3. Explain and evaluate current planning efforts at the local and state level as they relate to sustainability.
4. Explain the professional planning code of ethics, and apply it to analyze planning practice case studies.
5. Assess, evaluate, and analyze local, regional, and state level planning projects.

Computer Networking and Applications (CNA)

CNA 169 Computers in Society

Same as CSCI 169. History, moral and social implications of computer technology, problem solving, extensive hands-on microcomputer experience involving software packages (including word processing, database management, spreadsheets).
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Differentiate between moral and immoral usage of technology in various disciplines such as medicine, law, humanities, etc.
2. Improve students' computer skills.
3. Use computer technology (hardware and software) to solve various problems.

CNA 201 Computer Networking Concepts

Local Area Networks, LAN configuration and troubleshooting, client-server networking, peer-to-peer networking. CNA/CSCI 169, or consent of instructor.
Prereq.: CNA 169, CSCI 169 3 Cr. Fall | Spring

Student Learning Outcomes

1. Design, configure, and troubleshoot Local Area Networks.
2. Differentiate between switched and non-switched networks.
3. Design and configure client-server networks.
4. Design and configure peer-to-peer networks.
5. Demonstrate knowledge of network devices, Ethernet, and Wireless Networking.
6. Learn to configure Windows administration and security.
7. Demonstrate knowledge of ethical standards in computer networking.

CNA 267 Beginning Programming

Input and output of data, arithmetic expressions, loops, functions and subroutines, one and two dimensional arrays, sequential files. Students without programming experience are strongly advised to take CNA 268 concurrently.
Prereq.: MATH 112 or equivalent. 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply concepts of object-oriented programming to solve problems.
2. Create programs using decision and loop control structures, variables, arrays and procedures.
3. Work with a database and with external sequential files.

4. Write correct, well-documented and readable programs.

CNA 268 Beginning Programming Lab

Lab component for students enrolled in CNA 267.
Coreq.: CNA 267 1 Cr. Fall | Spring

Student Learning Outcomes

1. Solve problems using concepts of object-oriented programming 2. Use decision and loop control structures, variables, arrays and procedures to create programs 3. Program with files and exception handling 4. Write correct, well-documented, and readable programs

CNA 302 Spreadsheet Applications and Programming

Integrated software package emphasizing spreadsheets. Programming in the package. Integration of related modules.
Prereq.: CNA/CSCI 169 3 Cr. Fall

Student Learning Outcomes

1. Solve problems using spreadsheet.
2. Define the syntax of functions and design a spreadsheet making use of them.
3. Using spreadsheet, produce statistics and create charts.
4. Write macros to automate spreadsheets.
5. Use VBA programming to create a user interface for a spreadsheet application.

CNA 303 Database Applications and Programming

Integrated software package emphasizing database design and management. Programming in the language of the software. Integration of relation modules.
Prereq.: CNA/CSCI 169 3 Cr. Spring

Student Learning Outcomes

1. Use database to examine the advanced features of databases.
2. Use and create all the objects involved in an Access database: tables, queries, forms, reports, macros and modules.
3. Develop a relational database management system.
4. Use VBA to create a user interface for an Access application.

CNA 304 Professional Publication Software

Word processing and graphics packages in a network environment. Creation and use of styles and templates. Use and configuration of a graphic operating system.
Prereq.: CNA/CSCI 169 3 Cr. DEMAND

Student Learning Outcomes

1. Create professional-looking documents in Microsoft Word.
2. Use advanced features of Microsoft Word: tables, forms, mail merge, tracking changes, templates, macros.
3. Create styles, outlines, tables, and tables of contents; manage long documents.
4. Create web pages with Word.
5. Use graphics with Microsoft applications.
6. Integrate data from spreadsheet and database programs into word processing programs.
7. Create graphic presentations using Microsoft PowerPoint, including menus and hyperlinks.

CNA 397 Operating Systems of Micros

Binary and hex arithmetic, microcomputer architecture, data types, storage classes and operators, control structure, operating systems, functions and characteristics, concurrent processing, I/O, resource allocation and scheduling.
Prereq.: CNA 201, CNA 267 or equivalent 4 Cr. Fall | Spring

CNA 425 Data Communications

Communication characteristics, protocols, software packages, set up, theory, and use of local area networks. Detailed coverage and application of the physical and data-link layers of the TCP/IP model.
Prereq.: CNA 397, MCS 397 Coreq.: CNA 426/526
3 Cr. Fall

CNA 426 Computer Networks

Network through application layers of the OSI model.
Prereq.: CNA 397 Coreq.: CNA 425/525 3 Cr. Fall

CNA 430 Firewall and Penetration Testing

Network access control. Firewall planning, installation, configuration, management, and performance. Network intrusion detection and prevention.
Prereq.: CNA 426 or consent of instructor 3 Cr. Spring

CNA 431 Offensive and Defensive Security Principles and Techniques

Analysis of vulnerabilities in OSI layer. Architecture and taxonomy of Intrusion Prevention Systems. Anomaly-based and signature-based systems. Virtual honeypots. Techniques and ethics of offensive security.
Prereq.: CNA 426 or ECE 423 or CSCI 413 or both SE 221 and CSCI 201 3 Cr. Spring

Student Learning Outcomes
1. Analyze security vulnerabilities of protocols in the OSI layer 2. Design secure network architecture for intrusion detection and prevention 3. Apply virtualization techniques and design virtual honeypots 4. Apply reconnaissance operations, identify attack targets, and create attack payload

CNA 432 OSI Layers Security
Security models and protocols for each OSI layer. Network and Web security implementation, monitoring, intrusion, recovery, and countermeasures.
Prereq.: CNA 426 or IS 353 or consent of instructor 3 Cr. Fall

Student Learning Outcomes
1. Assess security education, risk and incident management.
2. Identify attacks to IT and Office, and treat taxonomy.
3. Install network devices, addressing and defense in depth.
4. Evaluate packet sniffers, threats and solutions to TCP/IP and wireless networks.
5. Manage preventive, detective and corrective security features for a Linux LAN.
6. Install preventive and detective measures for UNIX and Windows.
7. Assess legal concerns, defense probing, and exploitation of security vulnerabilities.

CNA 433 Security Fundamentals and Laws
Security design principles. Security risk assessment and management. Applied symmetric and asymmetric cryptography. Cyber security laws.
Prereq.: MATH 271 and one of the following: CNA 426 or ECE 423 or CSCI 413 3 Cr. Fall

Student Learning Outcomes
1. Identify and use appropriate symmetric and asymmetric encryption algorithms.
2. Analyze the common design pitfalls of security applications.
3. Analyze the limitations of various security key-management systems.
4. Interpret the legal issues governing the authorized use of security tools, techniques, technology and data to conduct cyber operations.
5. Quantify the extent of the compliance of cyberspace operations with U.S. law.

CNA 435 Offensive and Defensive Security Principles and Techniques Lab
Hands-on experiments on vulnerability testing, packet crafting, attack target identification, payload generation, and virtualization.
Prereq.: CNA 426 or ECE 423 or CSCI 413 Coreq.: CNA 431 1 Cr. Spring

Student Learning Outcomes
1. Test security vulnerabilities of protocols in the OSI layer 2. Craft malformed packets and analyze response 3. Apply virtualization techniques, and design virtual honeypots 4. Identify attack targets, and generate attack payload

CNA 436 World Wide Web Authoring and Administration
Authoring and implementing web documents. Setting up and administering web servers.
Prereq.: CNA 426 or consent of instructor 3 Cr. Fall

Student Learning Outcomes
1. Use text, lists, links and images to implement a web page.
2. Create tables, frames and collect data with forms on a web page.
3. Use JavaScript interactivity capability and embedded objects to vitalize a web.
4. Build style sheets and use dynamic HTML to publish a web page.
5. Configure resources and implement a web server configuration.
6. Create spreadsheet and database enabled web applications.
7. Provide security for a web server and manage the web server.

CNA 437 Computer Network Security
Developing an effective network security strategy. Analyzing hole in protocols, designing firewalls, authentication and combatting the Hacker Tools.
Prereq.: CNA 426-526 3 Cr. Spring

Student Learning Outcomes
1. Use the basic cryptography techniques such as encryption, authentication and key management to

solve network security problems.
2. Evaluate access control techniques and security policy models.
3. Install and evaluate tools to secure networking and internetworking.
4. Install and evaluate tools for protecting digital contents.
5. Apply hash functions to validate message integrity.
6. Use public-key cryptography to authenticate users and to provide data confidentiality.

CNA 438 Applied Cryptography

Cryptography in secure communications. Secret and Public Key methods. Management of this technology and its relationship to system security policy. Legal and social implications.
Prereq.: CNA 397, CSCI 201, MATH 221 and MATH 271 with C- or better in each. Coreq.: CNA 425 or CNA 426 3 Cr. Fall | Spring | DEMAND

Student Learning Outcomes
1. Evaluate the design principles underlying conventional ciphers.
2. Implement and evaluate symmetric and asymmetric ciphers.
3. Implement public-key encryption algorithms.
4. Examine the use of message authentication codes, hash functions, digital signatures and public-key certificates.
5. Evaluate the applications of codes in computer security.
6. Evaluate the applications of Advanced Encryption Standard.
7. Examine system security policy, legal and social implications of cryptography technology.

CNA 440 Applied Public Key Infrastructure

Concepts, services, components, and products. Software installation and configuration. Digital certificate implementation.
Prereq.: CNA 426 or IS 353 3 Cr. DEMAND

Student Learning Outcomes
1. Identify the basic components of PKIs.
2. Install and apply digital certificates.
3. Configure and manage PKIs.
4. Evaluate the issues of PKIs.

CNA 444 Internship

Supervised training opportunity provided by industry or an educational institution.
Prereq.: CNA 426 Coreq.: 1-12 Cr. DEMAND

Student Learning Outcomes
1. Work in an organization with Information Technology-related functions under a site supervisor.
2. Write an internship paper.

CNA 450 Data Network Performance Analysis

Quantitative evaluation and data networks; pinpointing bottlenecks and corrective strategies.
Prereq.: CNA 426-526, STAT 229, STAT 417 3 Cr. Fall

Student Learning Outcomes
1. Evaluate the needs for designing and building TCP/IP networks.
2. Use tools and techniques to evaluate the performance of TCP/IP networks.
3. Investigate performance concepts and issues in emerging network environments running TCP/IP.
4. Understand in-depth treatment of congestion control algorithms used at end hosts and in network routers.
5. Evaluate critical performance issues and derive solutions for TCP implementation in end systems.
6. Use OPNET or NS to build and evaluate the performance of networks.

CNA 451 Data Network Design

Students will develop their own document specifying a hypothetical data network through the use of simulation and case studies.
Prereq.: CNA 426, STAT 417 or consent of instructor 3 Cr. Spring

Student Learning Outcomes
1. Apply modeling and network design techniques to design data networks based on performance objectives and design and cost constraints.
2. Evaluate WAN design issues and emerging technologies.
3. Use simulation software to design networks and estimate traffic flows.

CNA 465 Wireless Networks

Design principles and practices, network architectures and protocols, configuration and performance analysis. Future trends.
Prereq.: CNA 426 3 Cr. Fall

CNA 473 Operational Software Safeguards

Implementation of network security policy. Evaluation of hacker tools. Preventative measures. Monitoring attacks and analyzing logs.
Prereq.: CNA 426 3 Cr. DEMAND

Student Learning Outcomes

1. Identify security policies for categories of business organizations.
2. Apply policy verification, security standards and audits.
3. Recognize and use appropriate security documents to recommend security procedures for small and large enterprises.
4. Classify assets and use access control to manage security.
5. Examine and use security compliance regulations for financial institutions, healthcare industry and small business.
6. Evaluate hacker tools and develop preventive measures.
7. Design and implement strategies for monitoring system attacks and analyzing attack log files.

CNA 474 Advanced Network Programming

Advanced network programming or system programming on microcomputers.
Prereq.: CNA 426, CSCI 201 3 Cr. Spring

Student Learning Outcomes

1. Write correct, well documented and readable complex systems programs.
2. Use XML to document systems application codes.
3. Design and implement client-server applications.
4. Use inheritance, polymorphism, interfaces and, Exceptions to implement systems applications.
5. Design and implement Windows applications.
6. Design and implement database applications accessible via networks.

CNA 475 Cloud Networking

Fundamentals of cloud computing. Virtualization of data centers. Cloud platform architecture. Service-oriented architectures. Applying client/server and peer-to-peer computing in clouds. Cloud programming. Cloud security. Current software platform.
Prereq.: CNA 426, or permission of instructor.
Coreq.: CNA 474 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply knowledge of networking paradigm and its functioning to cloud computing.
2. Apply essential features of virtualization to data-center automation.
3. Design data-center, interconnection networks, compute and storage clouds.
4. Apply fundamental service-oriented architectures for cloud computing to solve real-world design.
5. Apply cloud computing to Client/Server network model and Peer-to-Peer computing with overlay networks.
6. Develop programming skills with Windows Azure components.
7. Apply strategies and basic techniques for data security, integrity, confidentiality and availability to cloud computing

CNA 485 Contemporary Networking Topics

Contemporary topics in the microcomputer area not covered in other microcomputer courses.
Prereq.: CNA 426 Coreq.: 1-6 Cr. Fall

Student Learning Outcomes

1. Demonstrate best practices of network and system administration.
2. Configure, administer, and secure services in a virtualized networked environment.
3. Demonstrate ethical and service-oriented administrative principles.

CNA 490 Practicum in Microcomputers

Supervised programming or installation and administration of software packages. Can be repeated for a maximum of 6 credits.
Prereq.: CNA 426, CNA 526 Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Design secure networks.
2. Configure and build networks with state-of-the-art technologies.
3. Evaluate design and security needs of networks .

Computer Science (CSCI)

CSCI 169 Computers in Society

Same as CNA 169. History, moral and social implications of computer technology, problem solving, extensive hands-on microcomputer experience involving software packages (including word processing, database management, spreadsheets).
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Apply human-computer drag-and drop interface and computational thinking to solve problems.
2. Identify and apply basics of spreadsheet, xhtml, database and script programming to solve computational problems.
3. Use tools available in cyber infrastructure to identify network packets and detect intrusions.

4. Apply ethical, legal and security concepts in professional and social settings.

CSCI 172 Introduction to Linux/Unix

Linux/Unix operating system environment: file system, command line instructions and execution commands, process control, shell scripts
1 Cr. Fall | Spring

Student Learning Outcomes

1. Describe features and operations of a Linux-Unix operating system environment 2. Manipulate the Linux-Unix file system 3. Use Linux-Unix command line instructions to control the operating system
4. Construct scripts using shell scripting

CSCI 200 Elements of Computing

Problem-solving strategies, top-down design, and computer algorithms. Files and editing. Documentation and testing. Control structures, input and output, and functions. Boolean functions and circuits. Social considerations.
Prereq.: MATH 196 or Coreq.: MATH 112 or test out of MATH 112 via math placement exam. 3 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

CSCI 201 Computer Science 1

Data abstraction, elementary data structures, and dynamic data structures. Sorting and searching. Error handling and recovery. Time and space analysis of algorithms and big-O notation. Linked and sequential implementations of the list, stack, queue, set, and matrix abstract data types. Time management.
Prereq.: MATH 112 or equivalent and either CSCI 200, ECE 102, CNA 267, IS 251 or permission of instructor 4 Cr. Fall | Spring

Student Learning Outcomes

1. Apply basic programming constructs---selection, iteration, subprograms--in complete, syntactically correct programs.
2. Design and implement applications that use two or more data abstractions (ADTs) and one main program.
3. Design and implement programs that apply simple sorting algorithms and binary search.
4. Develop a program in multiple stages; use stubs to test the system as a whole; use drivers to carry out unit testing for functional components and for data abstractions.
5. Write design and user documentation for programs of simple to moderate complexity.
6. Communicate both technical and non-technical aspects of their work in formal and informal situations.
7. Analyze the time complexity of simple algorithms in terms of the big-O notation, and choose among competing algorithms on the basis of their big-O behaviors.
8. Maintain a record of time devoted to the component tasks in the completion of programming projects. Design test cases for programs and write a document reporting on those tests.

CSCI 220 Computer Architecture I

CPU architecture, number systems, digital circuit design, assembly language programming, VHDL programming.
Prereq.: CSCI 200 or CSCI 201, MATH 115 or MATH 211 Coreq.: CSCI 201 4 Cr. Fall | Spring

CSCI 260 Programming in C

Study of the features of the C programming language. Application of C in problem solving.
Prereq.: Programming experience in a block-structured language. 2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Analyze a problem, and identify and define the computing requirements to solve it.
2. Apply knowledge of computing and mathematics appropriate to solve problems.
3. Develop simple algorithms, design and implement a computer program to meet desired needs.
4. Write clear reports and communicate effectively the results of the work.
5. Use tools available in cyber infrastructure.

CSCI 261 Programming in C++

Study of the features of the C++ programming language. Application of C++ in problem solving.
Prereq.: CSCI 260 or equivalent 2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Analyze a problem, and identify and define the computing requirements to solve it.
2. Apply knowledge of computing and mathematics appropriate to solve problems.
3. Develop simple algorithms, design and implement a computer program to meet desired needs.
4. Write clear reports and communicate effectively the results of the work.
5. Use tools available in cyber infrastructure.

CSCI 262 Programming in Java

Study of the Java programming language features. Applications of Java in problem solving. Prereq.: Introductory-level programming experience. This course may not be used to satisfy any of the requirements of the computer science undergraduate programs. 2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Become familiar with and understand the appropriate use of the basic concepts of the Java programming language.

CSCI 263 Advanced Programming in C

Study of advanced features of C programming language. Application of C in problem solving. Prereq.: Programming in C. This course may not be used to satisfy any of the requirements of the computer science undergraduate program. 2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Become familiar with and understand the appropriate use of the advanced concepts of the C programming language.

CSCI 264 Advanced Programming in C++

Study of advanced features of C++ programming language. Application of C++ in problem solving. Prereq.: Programming in C++. This course may not be used to satisfy any of the requirements of the computer science undergraduate programs. 2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Become familiar with and understand the appropriate use of the advanced concepts of the C++ programming language.

CSCI 265 Advanced Programming in Java

Study of advanced features of Java programming language. Application of Java in problem solving. Prereq.: Programming in Java. This course may not be used to satisfy any of the requirements of the computer science undergraduate programs. 2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Become familiar with and understand the appropriate use of the advanced concepts of the Java programming language.

CSCI 266 Programming in C#.net

Study of the C# programming language features. Applications of C# in problem solving. This course may not be used to satisfy any of the requirements of the computer science undergradaute programs. Prereq.: Introductory-level programming experience. 2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Analyze, identify and define the computing requirements to solve a problem.
2. Apply appropriate knowledge of computing and mathematics to solve problems.
3. Develop simple algorithms, design and implement a computer program to meet desired needs.
4. Write clear reports and communicate effectively the results of the work.
5. Use tools available in cyber infrastructure.

CSCI 301 Computer Science 2

Recursion and recurrence. Trees, binary trees, 2/3 trees, directed and undirected graphs, searching and sorting, program layering. Sequential file processing, indexed files, and hashing techniques. Prereq.: CSCI 201 Coreq.: MATH 271 4 Cr. Fall | Spring

CSCI 310 Introduction to Operating Systems

Multiprogramming operating systems concepts, system structures, functions, and services. Process scheduling and synchronization. Primary storage management. Secondary storage organization, directory and file management concepts. Access and information security. Performance analysis. Prereq.: CSCI 220 or ECE 320; CSCI 301 Coreq.: CSCI 320 or ECE 323 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply structured principles and good practices to the task of developing software systems.
2. Understand general operating system functions and structures, comprehend system capabilities and modify systems to meet specifications.

CSCI 311 Systems Programming

System calls for process creation, destruction, management and synchronization, and file and directory management. Operating systems implementation and installation. Prereq.: CSCI 310 2 Cr. Fall | Spring

Student Learning Outcomes

1. Apply structured principles and good practices to the task of developing software systems.

2. Understand general operating system functions and structures, comprehend system capabilities and modify systems to meet specifications.

CSCI 320 Computer Architecture 2

Design of arithmetic and sequential circuits, instruction sets, and CPU controllers. Memory organization, pipelined processors, and I/O interface. Advanced assembly language programming.
Prereq.: CSCI 220, MATH 271 4 Cr. Fall | Spring

Student Learning Outcomes

1. Employ basic computer architecture in designing hardware and software.

CSCI 330 Programming Language Concepts

Survey of several high-level languages, their compilers and inherent data structures. Formal description of high-level languages.
Prereq.: CSCI 301, CSCI 320 Coreq.: CSCI 320 3 Cr. Spring

Student Learning Outcomes

1. Use formal structures when describing the syntax and semantics of programming languages.
2. Concepts of lexical analysis, parsing and semantic analysis; scope, binding, control flow and abstraction in various programming languages; Lambda calculus and functional programming.
3. An understanding of the formal description of a high-level programming language; aspects of compiling; distinguishing features of various paradigms of programming.
4. Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.

CSCI 331 Software Systems

Problem solving strategies and concepts applied in the context of issues associated with the design and implementation of software systems using a combination of current software packages/environments. Subjects addressed include file processing, data modeling and mapping to storage structures, data base systems, and software design and implementation.
Prereq.: CSCI 220 OR ECE 220; CSCI 301 3 Cr. Fall

Student Learning Outcomes

1. Apply structured principles and good practices to the task of developing software systems.
2. Communicate both technical and non-technical aspects of their work in formal and informal situations.
3. Apply common formal methods to the process of constructing a system and an appreciation of the need to study and develop such methods.
4. Analyze various aspects of the process used when designing a system and employ established frameworks to evaluate the completed work.

CSCI 332 Computing Ethics

Issues of software reliability and risk, private property, gender, minority, multicultural perspectives, privacy, the effect of value systems on computer science. Issues of computer ethics affecting individuals and society.
Prereq.: Completion of all other 300-level computer science requirements or permission of instructor. 3 Cr. Spring

Student Learning Outcomes

1. Communicate both technical and non-technical aspects of their work in formal and informal situations.
2. Understand the professional code of ethics and an ability to conduct themselves in a professional manner.

CSCI 334 Communication for Computing Sciences

Oral and written communication in the context of the computing sciences.
Prereq.: CSCI 301 Coreq.: CSCI 331 or any CSCI 400-level course 1 Cr. DEMAND

Student Learning Outcomes

1. Acquire those oral and written communication skills required for effective performance as computer scientists.

CSCI 361 Introduction to Scripting Programming

Writing scripts using shell scripting and R scripting. Shell and R scripting basics and environment, arithmetic, decision making and repetition control structures, arrays, functions.
Prereq.: CSCI 201 3 Cr. Fall | Spring

Student Learning Outcomes

1. Manipulate shell scripting and R scripting and its environment 2. Use input and output instructions in shell and R scripting 3. Apply variable declarations and solve mathematical expressions 4. Construct scripts using shell and R control structures, including decision making and repetition 5. Apply divide-and-conquer techniques to write shell and R functions 6. Use array data structures and process them

CSCI 402 Introduction to the Theory of Computation

Regular languages, finite-state automata, context-free languages, grammars, push-down automata, Turing machines, Church's thesis, the halting problem and computability.
Prereq.: CSCI 320 and MATH 271 or MATH 304 3 Cr. DEMAND

Student Learning Outcomes

1. Apply formal methods to the process of constructing a system and appreciate the need to study and develop such methods.
2. Apply the principles learned in the core curriculum to various application domains, build on those principles, and stay current in their knowledge.

CSCI 403 Theory, Design and Construction of Compilers

Formal grammars, lexical analysis, symbol tables, syntax analysis and parsing, type checking, code generation, code optimization.
Prereq.: CSCI 320, CSCI 330, MATH 373 5 Cr. DEMAND

Student Learning Outcomes

1. Apply structured principles and good practices to the task of developing software systems.
2. Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
3. Apply formal methods to the process of constructing systems and appreciate the need to study and develop such methods.
4. Analyze the processes used when designing a system and employ established frameworks to evaluate the completed work.

CSCI 404 Design and Analysis of Algorithms

Computing time functions; maximum, minimum and average computing time of various algorithms.
Prereq.: CSCI 331, MATH 253 or 373 3 Cr. DEMAND

Student Learning Outcomes

1. Apply structured principles and good practices to the task of developing software systems.
2. Apply formal methods to the process of constructing a system and appreciate the need to study and develop such methods.
3. Apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.

CSCI 406 Formal Methods

Formal methods for specification, validation and verification in software development life cycle. Specification techniques. Formal methods integration with programming languages. Application of formal methods in requirements and safety analysis, testing, software reuse.
Prereq.: CSCI 311, CSCI 330, or permission of instructor. 3 Cr. DEMAND

Student Learning Outcomes

1. Write a quality software requirements document.
2. Apply software requirements to guide program development.
3. Use abstractions and formal methods in the design of programs.
4. Represent knowledge, policies, and verification formally.
5. Specify communication and concurrencies with algebraic methodologies.
6. Test software and assure its quality.
7. Use reusable software patterns.
8. Apply current theories, models, and techniques.

CSCI 411 Database Theory and Design

Principles of database systems, theory of relational databases, design techniques, concurrency control and recovery, object-oriented systems.
Prereq.: CSCI 331 OR (CSCI 301 and SE 240) 3 Cr. DEMAND

Student Learning Outcomes

1. Apply structured principles and good practices to the task of developing software systems.

CSCI 412 Distributed Systems Principles

Distributed systems architecture. Process synchronization. Distributed operating systems, file systems and database systems. Projects.
Prereq.: CSCI 311 3 Cr. DEMAND

Student Learning Outcomes

1. Apply structured principles and good practices to the task of developing software systems.

CSCI 413 Computer Networks

Computer network architecture. The OSI seven-layer reference model and communication protocols. Network services. Projects for current applications.
Prereq.: CSCI 311 3 Cr. DEMAND

Student Learning Outcomes

1. Be able to apply structured principles and good practices to the task of developing software systems.
2. Understand how hardware provides the necessary structure for execution and influences the design of software.
3. Understand general operating system functions and structures, comprehend system capabilities and modify systems to meet specifications.
4. Be able to apply formal methods to the process of constructing a system and appreciate the need to study and develop such methods.
5. Be able to apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.

CSCI 415 Computer Security

Cryptography, network security and system security. Cryptographic methods, key distribution, and protocols for authenticated and confidential communications. Network and system security.
Prereq.: CSCI 310, MATH 271, MATH 312 3 Cr.
DEMAND

Student Learning Outcomes

1. Solve problems by applying mathematical foundations of cryptography and cryptographic algorithms.
2. Implement cryptographic algorithms and protocols using software.
3. Demonstrate vulnerabilities of cryptographic protocols.
4. Master the essentials of new developments through self-study.
5. Demonstrate applicability of cryptography to system-level security issues.

CSCI 430 Object-Oriented Software Development

Techniques for identifying and specifying objects, object classes and operations in designing software. Development of a major project using object-oriented analysis, design and programming techniques.
Prereq.: CSCI 331 or (CSCI 301 and SE 240) 3 Cr.
DEMAND

Student Learning Outcomes

1. Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
2. Analyze the processes used when designing a system and employ established frameworks to evaluate the completed work.
3. apply the principles learned in the core Curriculum to various application domains, build on these principles, and stay current in their knowledge.

CSCI 431 Software Engineering I

Software engineering concepts, life-cycle models, software process, team organization and management, software engineering tools, estimation and planning, requirements gathering, analysis, design and implementation, software testing, reusability and portability, encapsulating algorithms, inheritance, patterns of patterns.
Prereq.: CSCI 331 or permission of instructor 3 Cr.
DEMAND

Student Learning Outcomes

1. Apply software engineering tools at each step of the software process.
2. Work effectively as part of a team to develop software.
3. Assure software quality.
4. Estimate the time and resources required at each step of software development.
5. Construct effective plans for the development of software.

CSCI 432 Software Engineering II - Large Scale Software Systems

Concepts and methods for the architectural design of large-scale software systems. Design Patterns. Transition of functional descriptions to structure and architectural descriptions. Analysis and design of existing and new architectures. Software engineering techniques to transform sequential programs into multithreaded and parallel programs. Project management. Quality assurance and control, precision, performance, economics.
Prereq.: CSCI 430 or permission of instructor. 3 Cr.
DEMAND

Student Learning Outcomes

1. Articulate the requirements of large systems.
2. Design large software systems.
3. Identify problems in the process of software development.
4. Apply modern techniques to software design problems.
5. Identify the main components of large systems.
6. Modify, extend, and combine methodologies.
7. Lead a software development team.
8. Transform sequential programs into multithreaded and parallel programs.

9. Integrate ethical, legal, and economic concerns into software development.

CSCI 433 Software Engineering III - Distributed Software Systems

Concepts and methods for construction of distributed and concurrent software using network protocols. Protection. Client-server programming, component-based software development.
Prereq.: CSCI 311 or permission of instructor. 3 Cr. DEMAND

Student Learning Outcomes

1. Apply network protocols in the design of distributed software products.
2. Build fault-tolerant software products.
3. Integrate security into each stage of the software development cycle.
4. Apply client-server programming and component-based software development.
5. Apply modern and emergent techniques in software development.

CSCI 434 High Performance Software and Systems

Basics of software performance, defining performance objectives UML-based rotations, software execution models, web applications and distributed systems, system execution, data collection, performance measurement, performance-oriented analysis, design and implementation, applications.
Prereq.: CSCI 311, CSCI 430 or permission of instructor 3 Cr. Even Spring

Student Learning Outcomes

1. Measure software performance.
2. Collect data with which to measure software performance.
3. Apply standard rotations with annotations to specify performance requirements.
4. Apply models of software execution.
5. Integrate performance measurement into the design and implementation of software systems.

CSCI 440 Introduction to Artificial Intelligence

Heuristic versus deterministic methods, game playing programs, theorem proving programs, decision making programs.
Prereq.: CSCI 330, MATH 253, MATH 271, MATH 373 3 Cr. DEMAND

Student Learning Outcomes

1. Apply structured principles and good practices to the task of developing software systems.
2. Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
3. Analyze the processes used when designing a system and employ established frameworks to evaluate the completed work.
4. Apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.

CSCI 441 Neural Networks

Natural and artificial neural networks. Back propagation, conjugate gradients, cascade-correlation training methods, associative memory. Self-organizing nets, adaptive resonance nets, Hopfield nets, constraint satisfaction networks. Design and applications.
Prereq.: CSCI 320 3 Cr. DEMAND

Student Learning Outcomes

1. Understand the fundamental concepts and methodology of neural networks.
2. Understand the structure, design, and training of various types of neural networks.
3. Gain knowledge in solving real-world problems using neural networks.
4. Understand the advantages and limitations of neural networks.

CSCI 442 Expert Systems

Theory and applications of expert systems. Knowledge acquisition and representation. Inference techniques. An expert system language. Design and evolution of expert systems.
Prereq.: CSCI 301 3 Cr. DEMAND

Student Learning Outcomes

1. Apply structured principles and good practices to the task of developing software systems.
2. Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
3. Analyze the processes used when designing a system and employ established frameworks to evaluate the completed work.
4. Apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.

CSCI 443 Evolutionary Computation

Population-based search heuristics inspired by biological evolution. Representations and operators. Specifying parameter values. Hybridization with local search and other search strategies. Constraint handling. Theory.
Prereq.: CSCI 301, MATH 373 3 Cr. DEMAND

Student Learning Outcomes
1. Apply structured principles and good practices to the task of developing software systems.
2. Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
3. Apply the principles learned in the core curriculum to various application domains, build on those principles, and stay current in their knowledge.

CSCI 444 Internship
Supervised programming for various departments. Can be repeated for a maximum of 6 credits.
Prereq.: Approval of department. Coreq.: 3-12 Cr. DEMAND

CSCI 450 Computer Graphics
Algorithms, data structures and techniques for generating graphics. Graphics hardware, display primitives, geometric transformations, perspective projection, clipping and user interaction.
Prereq.: CSCI 301, and either MATH 311 or MATH 312 3 Cr. DEMAND

Student Learning Outcomes
1. Apply structured principles and good practices to the task of developing software systems.
2. Apply formal methods to the process of constructing a system and appreciate the need to study and develop such methods.
3. Apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.

CSCI 475 Advanced Topics in Computer Science
An in-depth study of one or more issues in contemporary computer science not covered in other computer science courses.
Coreq.: 1-6 Cr. DEMAND

Student Learning Outcomes
1. Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
2. Use current techniques, skills, and tools necessary for computing practice.
3. Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehesion of hte trade-offs involved in design choices.
4. Apply design and development principles in the construction of software systems of varying complexity.

CSCI 480 Computer Seminar
Reading, research and discussion of selected topics.
1 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate the ability to communicate effectively with a range of audiences.
2. Recognition of the need for and an ability to engage in continuing professional development.
3. Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the trade-offs involved in design choices.

CSCI 490 Practicum in Computer Science
Supervised programming for various departments. Can be repeated for a maximum of 6 credits.
Prereq.: Approval of department Coreq.: 1-2 Cr. DEMAND

Student Learning Outcomes
1. Apply knowledge of computing and mathematics appropriate to the discipline.
2. Apply structured principles and good practices to the task of developing software systems.
3. Apply the principles learned in the core curriculum to various application domains, build on these principles, and stay current in their knowledge.
4. Effectively communicate both technical and non-technical aspects of their work in formal and informal situations.
5. Engage in continuing professional development.

Counselor Education and Educational Psychology (CEEP)

CEEP 361 Introduction to Educational Psychology
Psychological theories, principles, and research applied to the educational settings, including measurement, standardized tests, instrument construction, and evaluation and assessment of student learning.

Prereq.: CEEP 262, PSY 240 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Justify the importance of theory and research on teaching and learning to classroom applications of effective instruction.
2. Implement a balance of reflective, effective teaching methodologies and science in approaches to educating students.
3. Compare and contrast behaviorist, cognitive, and constructivist theories of learning and effective classroom practices derived from each theory.
4. Select from and apply theoretically derived research based practices to classroom instruction techniques.
5. Describe cognitive, personal, social and emotional theories of development and their implications for teaching relative to student needs and classroom practice.
6. Implement appropriate strategies to address variations in student abilities, learning difficulties, culture, gender and SES.
7. Describe and apply models of motivation to enhance student learning and achievement.
8. Explain how teaching methods, grouping arrangements, learner variables and instruction content may be integrated for effective learning.
9. Develop a model for assessing student learning using basic psychometric principles, a means of evaluating student responses to this assessment and a means of using the assessment data to improve student learning.
10. Interpret standardized test results and communicate results to parents and students.

CEEP 384 Individual and Group Differences
The nature, extent, and causes of individual and group differences; the methodological problems of measuring human differences.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

CEEP 465 Stress Management
Stress disorders, assessment procedures, and strategies with which to control stress reactions.
3 Cr. DEMAND

CEEP 476 Research Methods in Applied Psychology
How to read, understand, and evalaute research. Group and single subject research designs, and statistical terms.
3 Cr. Fall | Spring

CEEP 493 Individual Appraisal
Psychological measurement of individuals; instruments used to appraise intellectual efficiency, aptitude and achievement, sensory capacities and efficiency, sensory-motor coordination, group status, personal history; synthesizing data and report writing.
Prereq.: CEEP 361, CEEP 463 or CEEP 665 3 Cr. DEMAND

Criminal Justice Studies (CJS)

CJS 111 Crime and Justice in America (Diversity)
(MGM) Components, structure, and functioning of the criminal justice system in America: crime victims, law enforcement, courts, corrections, probation, parole, community corrections and juvenile justice. Document the failures of the system to provide equal justice to all people, especially women, children, and people of culturally diverse backgrounds.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

CJS 199 Independent Study
Offered at the discretion of departments, this program is intended for the very able, motivated student whose intellectual needs are partially served by serious independent study. Permission of instructor required. May be repeated.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 299 Independent Study
Offered at the discretion of departments, this program is intended for the very able, motivated student whose intellectual needs are partially served by serious independent study. Permission of instructor required. May be repeated.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 305 Introduction to Private Security
Threat assessment, risk prevention, protection of assets, security systems, and the issues, standards, and goals of private security.
Prereq.: CJS 111 or instructor permission 3 Cr. Odd Fall

CJS 325 Comparative Criminal Justice
A comparative study of criminal justice systems in the world. The philosophical, historical, legal, and

political roots of these systems will be examined. Although the course is international in scope, emphasis will be placed on Europe.
Prereq.: CJS 111 3 Cr. Even Spring

Student Learning Outcomes
1. Apply unique features of dominant criminal justice systems; Civil Law, Common Law, Socialist and Sharia Law as practiced in different countries.
2. Distinguish different approaches to Crime and Punishment based on the type of Criminal Justice System examined.
3. Evaluate the notions of Transnational and International Crime and Global Justice.
4. Apply the role of International Tribunals, International Criminal Courts, International Declarations, Treaties and Conventions in Global Justice to describe how Global Justice works.

CJS 399 Independent Study
Offered at the discretion of departments, this program is intended for the very able, motivated student whose intellectual needs are partially served by serious independent study. Permission of instructor required. May be repeated.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 401 Introduction to Gang Issues
Formation, continuance, and expansion of gangs; nature of, theoretical explanations for, response to, and public policies related to gangs in the United States.
Prereq.: CJS 111 or instructor permission 3 Cr. Even Spring

Student Learning Outcomes
1. Establish a theoretical knowledge-base upon which to build comprehension of gang issues.
2. Develop a greater understanding of the nature of gangs and life as experienced by many of today's youth.
3. Increase critical thinking skills by identifying and discussing applications of appropriate theories within the scope of gang issues.
4. Increase verbal communication skills through class discussions.
5. Increase written communication skills through writing assignments.

CJS 411 Organization and Administration in Criminal Justice
Current theories of organization as they relate to the needs of the criminal justice process.
Prereq.: CJS 101, CJS 111 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Apply different Theoretical and Organizational models to Administration of Justice.
2. Connect the Declarations of Independence, The Constitution and The Bill of Rights as a bases for understanding American Criminal Justice System.
3. Use different Organizational Theories to explain the workings of the American Criminal Justice Organizations.
4. Describe the Increasing Role of Technology and its Future Implications on Criminal Justice Policy and Administration and the Implications of Information Media and Change on the Criminal Justice System.

CJS 415 Corrections: Theory and Practice
Historical development, theories, and institutions of punishment and social control. Social systems of prisoners and officers; institutional administration and legal issues in management; policies and strategies of intervention; decision-making in sentencing and parole; and treatment and organization as they relate to the criminal justice process.
Prereq.: CJS 111 and CJS 411 or CJS 433 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Describe and analyze the historical development of prisons.
2. Actively examine the content of theories and institutions of punishment and social control.
3. Describe and analyze the issues and trends within community corrections.
4. Demonstrate knowledge of gender, racial, and juvenile problem identification and possible solution development related to pre- and post-incarceration.

CJS 420 Critical Issues in Law Enforcement
Issues facing law enforcement officials in a free society. Ethnic tension, civil disobedience, police conduct, unionization, civil distrubances, and professionalism within law enforcement.
Prereq.: CJS 111 and CJS 411 or CJS 433 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Describe and analyze the critical issues and controversies facing law enforcement today such as recruiting, training and supervision of police forces.
2. Evaluate current and new policing philosophies

and their effectiveness with various diverse populations and communities.
3. Describe and analyze the issues involving ethics and police misconduct and the prevalence and consequences of police misbehavior.
4. Analyze, assess and report on one issue of policing covered throughout the class and demonstrate a clear understanding and knowledge of this issue to other members of the class.

CJS 421 Peace Officers Standards and Training: Administration

Principles of law enforcement, career influences, stress/crisis intervention, crime prevention, community relations, court testimony, law enforcement communications, and cultural awareness.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Describe and analyze the history of policing and the movement toward a community policing philosophy.
2. Evaluate current trends in the implementation of community oriented policing within law enforcement agencies.
3. Describe and explain the problems associated with racially profiled stops and the need to eliminate the use of racial profiling.
4. Describe and analyze what legally constitutes domestic abuse and the impact violence has on families.
5. Analyze and identify key leadership principles, the core ethical principles, and appropriately apply these principles to police situations.

CJS 422 Peace Officers Standards and Training: Statutes

Minnesota statues relating to the Minnesota Criminal Code, Minnesota law enforcement procedures relating to search, arrest, confessions, identification, and evidence, and Minnesota Statues relating to juvenile justice.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Analyze and describe the Criminal Justice System, including: the procedure by which laws, statutes, United States and Minnesota constitutional provisions are enacted, interpreted, and enforced; how the Judicial System functions; the functions and jurisdictions of related law enforcement and correction agencies.
2. Analyze and describe the general principles of Constitutional and Criminal Law governing Law Enforcement Agencies, including: the general principles of the United States and Minnesota constitutions and amendments and the constitutional and statutory requirements for lawful Minnesota statues (Stops and Frisks, Arrests, Searches and Seizures, Confessions, Eye Witness Identifications, Admissible Evidence).
3. Analyze and describe the philosophical, constitutional and statutory requirements of the Juvenile Justice System.
4. Analyze and describe the Criminal and Civil Liability of law enforcement officers and agencies.
5. Analyze and describe the definitions and principles of the Minnesota Criminal Code, and other selected statutes defining criminal conduct and regulating law enforcement.

CJS 425 Sex Crimes and Sex Offenders

Identification, definition, and codification of deviance as a criminal act; definitions of sex offenses and social response to a sexual offense; treatment efforts and incarceration outcomes for offenders.
Prereq.: CJS 111 and CJS 411 or CJS 433 or instructor permission 3 Cr. Even Spring

Student Learning Outcomes

1. Demonstrate ability to articulate a knowledge base of a history of sexuality, definitions of healthy sexuality, crime and deviance.
2. Critically evaluate the types of sexual offenses, sex offender classifications, sex offender laws, policies, and practices.
3. Analyze the current social and community responses to sex offenders who are released back into the community after a term in confinements.
4. Identify and discuss sex offender prevention policy and procedures.

CJS 430 Criminal Law

Principles of criminal liability, defenses to criminal prosecution, elements of major crimes.
Prereq.: CJS 111 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Analyze criminal statutes to determine the elements of various crimes and apply those elements to a fact situation to determine whether a crime has occurred.
2. Determine whether a criminal statute comports with the requirements/limitations of the Due Process Clause of the United States Constitution.

3. Distinguish between the major intent states, e.g., knowingly, intentionally, recklessly, set forth in the American Law Institute's Model Penal Code.

CJS 431 Criminal and Juvenile Procedure

Law of criminal and juvenile procedure from arrest through post-trial proceedings.
Prereq.: CJS 111 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. "Identify the different approaches to Incorporation Doctrine, e.g., ""fundamental fairness,"" ""selective incorporation,"" ""total incorporation,"" employed by the United States Supreme Court." 2. Apply the various approaches to Incorporation Doctrine to particular Constitutional rights to determine whether those rights apply against the individual states.
3. Analyze the requirements of Constitutional guarantees in the areas of: right to appointed counsel; privilege against compelled self-incrimination; freedom from unreasonable search and seizure; and apply them to fact situations in order to determine whether a Constitutional violation has occurred.

CJS 433 Ethical Studies in Criminal Justice

Ethical decisions relating to criminal justice issues.
Prereq.: CJS 111 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify examples of ethical issues within criminal justice.
2. Evaluate appropriate ethical behaviors and practices within criminal justice.
3. Describe the ethical complexity of different social, racial, and cultural perspectives to prepare for diverse people and ideas within criminal justice.
4. Apply ethical standards to situations in the criminal justice system.

CJS 441 Correctional Alternatives

Alternatives to incarceration: probation, fines, house arrest, electronic surveillance, restitution programs, sentencing to service, community residential facilities, parole and supervised release. Probation and community corrections agent roles and responsibilities; pre-sentence in investigation; supervision methods.
Prereq.: CJS 111 and CJS 411 or CJS 415 or CJS 470 or instructor permission 3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe and analyze the historical development of community-based corrections.
2. Describe and analyze the current policies and practices within community-based corrections (e.g., probation, parole, and community residential correctional programs).
3. Describe the applicability of risk and needs assessments pertaining to offenders.

CJS 444 Internship

Permission required.
Coreq.: 1-16 Cr. Fall | Spring | Summer

CJS 445 Crisis Intervention

History, theory and methods of crisis intervention, especially as used in the criminal justice system.
Prereq.: CJS 111 and CJS 411 or CJS 433 3 Cr. Odd Fall

Student Learning Outcomes

1. Identify crisis intervention methodologies utilized within the criminal justice system.
2. Describe effective crisis interventions for working with offenders and victims within the criminal justice system.
3. Apply theoretical models and evidenced-based intervention practices within the criminal justice system.

CJS 446 Child Abuse and the Criminal Justice System

A survey of the response to physical and sexual child abuse by the criminal justice system, including the law, law enforcement prosecution, courts and corrections.
Prereq.: CJS 111 and CJS 411 or CJS 433 or instructor permission 3 Cr. Odd Fall

Student Learning Outcomes

1. Describe and analyze the issues and trends within the Criminal Justice and Social Welfare Systems regarding child abuse.
2. Describe and analyze the Minnesota State Statues regarding child physical and sexual abuse and child maltreatment.
3. Describe and analyze the assessment, investigation, and intervention processes of sexually exploited children within the criminal justice system.

CJS 450 Juvenile Justice System

History and development of the juvenile justice system; the role of police and juvenile courts;

analysis of dispositional decisions; probation investigation and supervision functions; juvenile corrections.
Prereq.: CJS 111 and CJS 411 or CJS 415 or CJS 461 or instructor permission 3 Cr. Odd Fall

Student Learning Outcomes
1. Describe and analyze the historical development of the juvenile justice system.
2. Actively examine the content of theories and institutions of punishment and social control (i.e., corrections, courts, and police) that pertain to juveniles.
3. Describe and analyze the juvenile institutional administration and legal issues in management, policies, and strategies.

CJS 455 Private Security and the Criminal Justice Community

The powers and authority of private security personnel. Requirements of and restrictions on private security. Criminal and civil liabilities faced by private security personnel.
Prereq.: CJS 111 and CJS 305 or CJS 411 or CJS 433 3 Cr. Odd Spring

Student Learning Outcomes
1. Identify the powers and authority within private security and the relationships to other criminal justice entities.
2. Describe the connections between private security and criminal justice communities.
3. Explain the legal liabilities faced by private security personnel.

CJS 457 White Collar Crime

Overview of white collar crime, including both corporate and occupational crime. Case studies in applicable criminal law and law enforcement procedures for detection.
Prereq.: CJS 111 and CJS 411 or CJS 433 3 Cr. Even Fall

Student Learning Outcomes
1. Identify white collar crime and explain the differences between this type of crime and conventional crime.
2. Describe the types of methodologies utilized to collect, analyze, and report white collar crimes.
3. Identify criminal justice agencies and describe how they reduce and combat white collar crimes.

CJS 461 Juvenile Legal Process

Legal background and basis for separate juvenile statutes and justice system; legal procedures for arrest, investigation, and adjudication of juvenile offenders; legal cases relating to rights of juveniles; Minnesota procedure.
Prereq.: CJS 111 and CJS 450 or instructor permission 3 Cr. Even Spring

Student Learning Outcomes
1. Describe the legal background and basis for separate juvenile statutes and justice system.
2. Evaluate the legal procedures for arrest, investigation, and adjudication of juvenile offenders.
3. Identify legal cases relating to rights of juveniles.

CJS 465 Community Policing a Diverse Society

Racial sensitivity, cross-cultural competency, gender awareness, deescalation techniques, communication, and sexual orientation issues as key objectives for law enforcement in service to the community from a public safety perspective.
Prereq.: CJS 111 and CJS 411 or CJS 420 or CJS 433 or instructor permission 3 Cr. Fall | Spring

Student Learning Outcomes
1. Describe how Jungian cognitive style of communication can affect one's behavior with diverse communities.
2. Describe and explain individual plans on how to recruit members of a diverse community into law enforcement and public safety organizations.
3. Assess differing value systems of members of diverse communities to better build relationships with those communities in a law enforcement context.

CJS 470 Evidence Based Practices

Evidence Based Practices in corrections (risk assessment, LSI-R, risk prediction, effective case management, motivational interviewing, and case planning) as applied to juvenile and adult correctional programs.
Prereq.: CJS 111 and CJS 411 or CJS 415 or CJS 441 or instructor permission 3 Cr. Fall | Spring

Student Learning Outcomes
1. Understand and use the basic principles of Motivational Interviewing and Effective Case Management.
2. Conduct an appropriate assessment interview and identify offender risk and needs.
3. Develop Case Plans for offenders.

4. Develop an understanding of Correctional Practices and general counseling.

CJS 473 Criminal Justice and the Media

Analysis of the images of crime and the criminal justice system that are presented through the mass media.
Prereq.: CJS 111 and CJS 411 or CJS 433 or instructor permission 3 Cr. Even Fall

Student Learning Outcomes

1. Demonstrate a knowledge base of the mass media's role in the social construction of reality.
2. Actively examine the content of crime and justice in the news and entertainment media.
3. Demonstrate a greater understanding of the nature the news media effect has on the processing of criminal cases.

CJS 480 Victimology: Theories and Principles

Types and theories of victimization; international principles; victims' bills of rights; and victim services.
Prereq.: CJS 111 and CJS 411 or CJS 433 3 Cr. Fall

Student Learning Outcomes

1. Establish a knowledge-base of theories and principles upon which to build comprehension.
2. Develop a greater understanding of the nature of victimity and victimization.
3. Increase critical thinking skills by identifying and discussing applications of appropriate theories within the scope of victimology.
4. Increase verbal communication skills through class discussions.
5. Increase written communication skills through writing assignments.

CJS 482 Victim Services

Principles of victimology and their application in services to victims; victim legislation and rights.
Prereq.: CJS 111 and CJS 480 or CJS 485 or instructor permission 3 Cr. Spring

Student Learning Outcomes

1. Establish a knowledge-base of principles of victimology and services to victims.
2. Develop a greater understanding of the rights of victims and victim services.
3. Increase critical thinking skills by identifying and discussing course material.
4. Increase verbal communication skills through class discussions.
5. Increase written communication skills through writing assignments.

CJS 485 Domestic Violence and Criminal Justice

Criminal justice responses to domestic violence.
Prereq.: CJS 111 and CJS 433 or CJS 480 or CJS 482 or instructor permission 3 Cr. Odd Spring

Student Learning Outcomes

1. Identify and discuss major theories and perspectives for domestic violence.
2. Identify and discuss criminal justice intervention strategies and processes.
3. Discuss the role of the criminal justice system in dealing with domestic violence.
4. Increase critical thinking skills by identifying and discussing course material.
5. Increase verbal communication skills through class discussions.
6. Increase written communication skills through writing assignments.

CJS 486 Theories of Crime and Justice

Value and application of theories of crime and justice in research, policy, and the administration of justice.
Prereq.: CJS 111, must be admitted to the Criminal Justice major and completion of 45 credits. 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Establish a broader base of theoretical knowledge.
2. Increase critical thinking skills by identifying and discussing applications of appropriate theories within the scope of criminal justice research, policy, and the administration of justice.
3. Increase verbal communication skills through class discussions.
4. Increase written communication skills through writing assignments.

CJS 487 Criminal Justice Research Methods

Quantitative and qualitative research designs and their use in criminal justice.
Prereq.: CJS 111, CJS 486, must be admitted to the Criminal Justice major and completion of 60 credits. 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Establish a base of knowledge regarding quantitative and qualitative research designs.
2. Increase critical thinking skills by identifying and

discussing applications of appropriate research designs within the scope of criminal justice research, policy, and the administration of justice.
3. Increase verbal communication skills through class discussions.
4. Increase written communication skills through writing assignments.

CJS 488 Senior Thesis
Capstone course. Individual research project based on an accepted thesis proposal.
Prereq.: CJS 111, CJS 486, CJS 487, must be admitted to the Criminal Justice major, and completion of 90 credits. 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Organize information and data using logic and critical thinking abilities.
2. Conduct formal academic research (to include: identifying a problem statement and research questions/hypotheses, collecting and analyzing data, and reporting findings).
3. Write at a professional level (to include: mastery of English grammar and syntax, appropriate vocabulary, attention to detail and formatting).
4. Exhibit professional public speaking skill (to include: appearance and bearing, voice control, and a capacity to think under pressure by responding to questions during the oral defense).

CJS 489 Seminar in Criminal Justice
Special issues in the fields of corrections, law enforcement, and the general areas of the administration of justice.
3 Cr. Even Fall | Odd Spring

Student Learning Outcomes
1. Identify research strategies and conduct research for a specified area within criminal justice.
2. Describe historical trends within a specified area of criminal justice.
3. Identify issues and apply appropriate theoretical solutions specific to an area within criminal justice.

CJS 490 Advanced Gang Studies
Learn from, and establish networks with, professionals who work with gangs and their issues in the many career fields of private and public service organizations, government agencies, and academic institutions; field trips; receive gang specialist certification.
Prereq.: CJS 111 and CJS 402 or instructor permission
3 Cr. Summer

CJS 496 Crime Analysis, Mapping and Profiling
Theory and application of spatial analysis techniques and mapping software for development of prevention, intervention and preparedness strategies relative to crime and homeland defense. Review of criminological theories; crime profiling of criminals and geography; role of the crime analyst; methodological, ethical and legal issues in crime mapping; and geographic information systems (GIS) software.
Prereq.: CJS 111 and CJS 411 or CJS 433 or instructor permission 3 Cr. Odd Spring

CJS 499 Independent Study
Offered at the discretion of departments, this program is intended for the very able, motivated student whose intellectual needs are partially served by serious independent study. Permission of instructor required. May be repeated.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Dance (DANC)

DANC 142 Dance for Everyone [Goal 6]
Introduction to fundamental techniques of contemporary dance forms: ballet, modern, jazz. 3 Cr. F, S.
3 Cr. Fall | Spring

DANC 196 Short Courses
Specific subjects selected to meet educational needs. Exact nature of course will be defined by the department.
Coreq.: 1-3 Cr. DEMAND

DANC 341 Global Dance Perspectives (Diversity)
Survey of world dance from pre-history to the present, tracing its religious social, ritualistic, theatrical, and aesthetic connections to human culture.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

East Asian Studies (EAST)

EAST 250 Introduction to East Asia (Diversity)
The East Asian human experience considered through the social sciences and the humanities.
3 Cr. Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

EAST 363 Faculty-Student Seminar-Japan

An interdisciplinary study of Japan.
3 Cr. Fall

Student Learning Outcomes
1. In a manner suitable for an upper division level course, identify major events, key figures, and dominant themes as related to the society and culture of Japan.
2. In a manner suitable for an upper division level course, utilize methods and theories to analyze the society and culture of Japan.
3. In a manner suitable for an upper division level course, compose a critical analysis of a topic related to the society and culture of Japan.

EAST 364 Faculty-Student Seminar-China
An interdisciplinary study of China.
3 Cr. Spring

Student Learning Outcomes
1. In a manner suitable for an upper division level course, identify major events, key figures, and dominant themes as related to the society and culture of China.
2. In a manner suitable for an upper division level course, utilize methods and theories to analyze the society and culture of China.
3. In a manner suitable for an upper division level course, compose a critical analysis of a topic related to the society and culture of China.

EAST 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for the further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Economics (ECON)

ECON 110 Personal Finance
Analysis of personal finance decisions with emphasis on measuring and comparing benefits, costs, and other economic information using mathematical computations, and interpreting those results.
Prereq.: MATH 072, or math placement test equivalent. 3 Cr. Fall | Spring GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

ECON 195 Economics and Democratic Citizenship
The economy, democratic government, and the citizen. Economic analysis of public policy.
3 Cr. DEMAND GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

ECON 197 Economics for Everyday Life
Basic economic principles and concepts applied to common daily decisions. Budgeting, taxes, consumer credit, home finance, insurance, savings and investing.
3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ECON 201 Introduction to Economics
Basic economic concepts and an overview of current economic issues. Cannot be taken after 205 or 206.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ECON 205 Principles of Macroeconomics
Economic decision-making, market processes, measurement and determination of aggregate prices and employment, money and banking process, fiscal policy, and monetary policy. May be taken before or after 206.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ECON 206 Principles of Microeconomics
Economic decision-making, marginal analysis, consumer and producer behavior in markets, price and output under different market structures, input markets, and policy analysis. May be taken before or after 205.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ECON 327 Introduction to International Economic Issues
Analyze the increasing internationalization of the world economy. Issues of international monetary systems and international macro-economic policy.
Prereq.: ECON 205, ECON 206 TAUGHT IN INGOLSTADT, GERMANY. 3 Cr. DEMAND

ECON 350 Economics of Developing Countries (Diversity)
Economic development and policy issues in developing countries.
3 Cr. Spring GOAL AREA 8: GLOBAL PERSPECTIVES

ECON 351 Environmental Economics

Economic principles relating to use of environmental resources. Market processes and the environment. Pollution, recycling, air and water quality, risk and environmental policy. Not open to economics majors and minors.
3 Cr. Fall

Student Learning Outcomes
1. Compare the marginal benefit (demand) and marginal cost (supply) of environmental resource (equality) use.
2. Distinguish between public goods and externalties as sources of environmental problems.
3. Analyze Coasian property right structures, Pigouvian taxes and subsidies, pricing, and command-and-control techniques for controlling pollution.
4. Develop efficiency and cost-minimizing approaches to environmental policy.
5. Recognize non-economic (legal and political) limitations to environmental policy.

ECON 360 Comparative Economic Systems
Real and ideal economic systems including capitalism, socialism, and communism.
3 Cr. DEMAND

ECON 365 Local and Urban Economics
Economic principles relating to local and urban affairs. Location theory; planning and community development; and analysis of urban problems and public policy: poverty, housing, transportation, pollution, public service provision, etc. Not open to economics majors.
3 Cr. DEMAND

Student Learning Outcomes
1. Analyze location decisions of firms and residences.
2. Apply declining marginal productivity, declining marginal benefit, and increasing marginal cost to location decisions.
3. Explore the history of cities, why they succeed and how they grow.
4. Recognize causes of local economic growth such as comparative advantage, injections, and multipliers 5. Demonstrate public good and externality aspects of location decisions.
6. Evaluate the impact of taxes, zoning, public expenditures (on education, transportation, infrastructure, etc.), and other public policies on economic growth.

ECON 381 Economics of Crime and Justice
Economic motivation for criminal behavior; costs of crime; optimal allocation of resources for preventing crime; welfare costs of criminal behavior. Not open to economic majors.
3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ECON 405 Intermediate Macroeconomics
Functioning of the economy as a whole. Determinants and interrelation of the economy's aggregate production, inflation, unemployment, economic growth, business cycles, and monetary/fiscal policies.
Prereq.: ECON 205,ECON 206, MATH 112 or 115 or 196 or 211 or higher. 3 Cr. Fall | Spring

Student Learning Outcomes
1. Define and Identify macroeconomic concepts such as national income, economic growth, aggregate demand and supply, recession, inflation, stagflation, national debt, fiscal policy, monetary policy, etc.
2. Associate such concepts with the domestic and international economic/political environment.
3. Propose economic solutions to macroeconomic problems.
4. Objectively critique different macroeconomic approaches and schools of thought.
5. Evaluate the external validity of macroeconomic models using facts and empirical data.

ECON 406 Intermediate Microeconomics
Economic processes in the free enterprise system; determination of price, output, and factor services in different market structures.
Prereq.: ECON 205,ECON 206, MATH 112 or 115 or 196 or 211 or higher. 3 Cr. Fall | Spring

Student Learning Outcomes
1. Manipulate indifference curves and budget constraints to explain consumer decision making and manipulate isoquants and isocost lines to explaining firm decision making.
2. Derive a demand curve from indifference curves and budget constraints and derive the long-run cost curves of firms from isoquants and isocost lines.
3. Compare production theory to cost theory, and apply cost theory to market structure analysis.
4. Implement output market analysis and input market analysis and analyze the connections between them.
5. Demonstrate the efficiency characteristics of

various market structures-perfect competition, monopoly, oligopoly, and monopolistic competition.

ECON 417 Managerial Economics

Economic analysis of decision-making. Demand, cost, capital, and profit analysis.
Prereq.: ECON 205, ECON 206, and IS 242 or STAT 219 or higher. 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify the objectives of an organization operating in the private, public, or not-for-profit sector of the economy and define the problem faced by the manager in reaching the organizational objectives.
2. Integrate the theories of demand, production, and cost with the level of market competition and information asymmetry.
3. Isolate and implement alternative strategies and constraints using marginal analysis and net present value.
4. Use software programs and data to estimate demand functions and elasticities, interpret results, and use them to analyze changes in variables.
5. Estimate the impact of alternative business strategies using regression analysis and forecasting techniques.

ECON 420 Economics of Nonprofit Organizations

Economic theories of nonprofit and public organizations; their importance in the economy; and the structure and performance of not-for-profit firms and public agencies.
Prereq.: ECON 205, ECON 206 3 Cr. DEMAND

Student Learning Outcomes

1. Evaluate the importance of perfect information, property rights, and transaction costs in the private market.
2. Explore the historical, cultural, and political dimensions of the nonprofit sector.
3. Differentiate the roles of the for-profit, nonprofit, and public sectors in the economy.
4. Enumerate the role of nonprofits, types of nonprofits, and tax treatment of nonprofits in the economy.
5. Examine the motivation of donors and volunteers, and develop a strategy to support and encourage these contributions.
6. Recommend an evaluation tool to measure the effectiveness of the nonprofit sector.

ECON 442 Law and Economics

Laws' effects on market and non-market behavior emphasizing the theory of externalities. Contract law, property rights, tort law, and public choice theory.
Prereq.: ECON 205, ECON 206 3 Cr. Spring

Student Learning Outcomes

1. Provide examples of how laws evolve in a common law system, and recognize when this evolution leads to greater efficiency.
2. Apply the Coase Theorem to legal disputes to identify when and how the initial allocation of a right matters.
3. Use damages as a legal remedy to create incentives for parties to efficiently enter into contracts and behave efficiently once contracts are entered into.
4. Analyze alternative tort liability rules as they pertain to incentives to invest in precaution.
5. Apply the economic way of thinking to explain why people commit crimes, and evaluate the implications of this approach as it pertains to policy toward crime.

ECON 444 Internship and Field Work

Intern in economics or intern in public service with a business, governmental, or civic organization approved in advance by the department.
Coreq.: 1-12 Cr. DEMAND

Student Learning Outcomes

1. Explain the purpose, mission and operation of host organization.
2. Integrate classroom knowledge with practical applications in the workplace.
3. Journal the duties and responsibilities in the workplace.
4. Synthesize the classroom experience with the practitioner duties and responsibilities.

ECON 451 Resource and Environmental Economics

Theory of public goods and externalities; analysis of stock resources (e.g., minerals and energy) and flow resources (e.g., forestry and fisheries); environmental economics and public policy analysis: air and water quality, pollution, global warming, biodiversity.
Prereq.: ECON 205, ECON 206 3 Cr. DEMAND

Student Learning Outcomes

1. Calculate the efficiency consequences of public goods and externalities in environmental and natural

resource use.
2. Specify when and why private and social marginal benefits or marginal costs might differ.
3. Determine the efficiency consequences of private property, common property, and other property right structures.
4. Demonstrate efficient decision making for forests, fisheries, extractive stock resources, and other environmental or natural resources.
5. Compare market based approaches to environmental problems versus current command-and-control approaches.
6. Evaluate Pigouvian taxes, permit systems, and other public policies for controlling resource use.

ECON 460 Public Finance

The role of government in the economy: public revenues and expenditures, tax structure, inter-governmental fiscal relations, fiscal policy, and public debt management.
Prereq.: ECON 205, ECON 206 3 Cr. DEMAND

Student Learning Outcomes
1. Analyze the operation of the private markets focusing on situations involving market failure (externalities and public goods), and propose alternative government interventions to restore efficiency.
2. Examine the political decision making process, exploring alternative decision rules and evaluating the resulting outcomes.
3. Appraise the economic impact of government policies such as taxes, subsidies, transfers, and expenditures on private market prices, quantities, and efficiency.
4. Evaluate the impact of social security, income support or welfare programs, public education, public health and other specific programs on economic behavior (e.g. incentives to work, retire, save, attend school and other choices).
5. Demonstrate how different taxes (income, sales, property, etc.) undermine efficiency and impact economic growth, and debate appropriate methods of financing government activity.

ECON 461 Public Economics: State and Local

The economics of state and local government. Public projects, tax and revenue structures, and intergovernmental relations, as in Minnesota.
Prereq.: ECON 205, ECON 206 3 Cr. DEMAND

Student Learning Outcomes
1. Identify sources of market failure and will be able to indicate options for correcting and addressing alternative types of market failure.
2. Comment on and explain programs, policies, or policy alternatives for state and local economic issues.
3. Analyze alternative voting arrangements and will be able to identify the efficiency and policy impacts associated with differing arrangements.
4. Identify types of intergovernmental grants as well as disbursement methods and be able to analyze efficiency and policy impacts.
5. Analyze taxes at the state and local level to better understand the impacts of voting and policy on efficiency.

ECON 465 Urban and Regional Economics

Analysis of regions, economic development, location theory, central place theory, agglomeration economies. Economic analysis of urban problems: poverty, transportation, housing, crime, intergovernmental relations.
Prereq.: ECON 205, ECON 206 3 Cr. Spring

Student Learning Outcomes
1. Assess the determinants of firm and residential location decisions and indicate how location decisions depend on transportation cost, demand elasticity, input versus market orientations, and other urban or regional differences.
2. Calculate the size of a market area and its contribution and use in central place theory and the evolution of cities.
3. Evaluate various growth theories and the impact differences in wages, multipliers, rents, productivity and comparative advantage have on growth.
4. Critique the role of taxes, public expenditures, zoning, and other public policy on individual location decisions and growth within economic regions.

ECON 470 Economic and Business Forecasting

Business fluctuations and stabilization policies. Forecasting methods; time series and other regression-based techniques for short and long term forecasting.
Prereq.: ECON 205, ECON 206, and IS 242 or STAT 219 or higher. 3 Cr. Fall | Spring

ECON 471 Money and Banking

Monetary economics, structure and functioning of commercial banks and other financial intermediaries. The Federal Reserve System and its

monetary policy tools, goals, and targets.
Prereq.: ECON 205, ECON 206 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Learn how to analyze the functioning of financial markets, depository institutions, and the Federal Reserve System in the U.S.
2. Identify each financial market's role within the macro-economy, as well as how these markets interact with one another.
3. Analyze each financial market using the corresponding actual data, online resources, web sites, and other related platforms.
4. Evaluate their understanding of the material covered by way of class projects, monetary economic surveys both online and traditional.

ECON 472 Industrial Organization and Public Policy

Market structure, firm behavior, and market performance. Public policy toward business via government regulation and antitrust policy.
Prereq.: ECON 205, ECON 206 3 Cr. Spring

Student Learning Outcomes
1. Apply the structure-conduct-performance paradigm to predict the efficiency of different markets, and explain how markets can evolve within this paradigm.
2. Recommend appropriate pricing strategies to maximize profit in different market structures.
3. Identify situations when firms use strategic behavior to reduce competition.
4. Compare traditional and contemporary industrial organization research in terms of both approach and findings.
5. Evaluate government laws and regulations used to promote competition among firms.

ECON 473 Labor Economics

Labor as a factor of production; growth of collective bargaining and labor legislation, and its effects upon society.
Prereq.: ECON 205, ECON 206 3 Cr. Spring

Student Learning Outcomes
1. Apply the supply and demand theory in the analysis of the labor market.
2. Analyze the economic decision process behind individual's job search and firms hiring process using compensation wage differentials and human capital models.
3. Identify salary's differences across occupations, geography, industries, and gender.
4. Apply the theory of job mobility and migration to explain the economics behind immigration labor market impact.
5. Evaluate labor market regulations used to correct market failures.

ECON 474 International Economics

Trade models, terms of trade, trade patterns, economic integration, and barriers to trade. Balance of trade/payments, exchange rate determination, capital mobility, and open economy policy coordination.
Prereq.: ECON 205, ECON 206 3 Cr. Fall

Student Learning Outcomes
1. Learn how to use the analytical tools in international trade and international finance in the context of an open macro-economy.
2. Identify costs and benefits of international trade in relation to labor, commodity, and financial markets.
3. Be familiarized with the international data using different tools, applications, and the like.
4. Gain adequate competency to empirically deal with a number of controversial issues such as tariffs, quotas, and other pertaining international policies.
5. Be familiarized with the economic issues faced the global economy.

ECON 478 History of Economic Thought

Historical development of economic analysis and of the ideas of major economic thinkers.
Prereq.: ECON 205, ECON 206 3 Cr. Fall

Student Learning Outcomes
1. Identify important contributors in economics and philosophy.
2. Use examples to illustrate the evolution of economic thought across differing schools of thought and over time.
3. Research prominent economists and their contributions to better understand the economics discipline and theories still taught today as well as why theories may have evolved over time.

ECON 480 Area Economic Studies

Economic problems of selected regions, areas, or countries of the world.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Identify data sources (both print and online) and conduct research in the field of economics.
2. Examine the important economic concepts and principles in the field of study.
3. Explain changes in economic conditions in terms of the economic principles involved.
4. Predict the probable outcome of an action involving economic principles.
5. Distinguish between probable and improbable economic predictions/forecasts.

ECON 481 Senior Research Seminar
Capstone course requiring empirical research paper using tools of economic analysis. A written and oral presentation. Course fulfills university's upper division writing requirement.
Prereq.: ECON 405, ECON 406, and either ECON 470 or ECON 485, and IS 242 or STAT 219 or higher. 3 Cr. Fall | Spring

Student Learning Outcomes
1. Identify an original research question in economics.
2. Create an appropriate cross-sectional, time-series, or panel data set that can be used to address the chosen research question.
3. Apply econometric tools to estimate the influence of certain factors on others to address the chosen research question.
4. Use correct terminology to interpret econometric results.
5. Create a capstone paper describing the research question, prior work, theory, econometric model, results, and policy implications.

ECON 483 Contemporary Economic Problems
Solutions of problems arising from growth and development of modern institutions under the free enterprise system.
3 Cr. DEMAND

Student Learning Outcomes
1. Identify data sources (both print and online) and conduct research in the field of economics.
2. Examine the important economic concepts and principles in the field of study.
3. Explain changes in economic conditions in terms of the economic principles involved.
4. Predict the probable outcome of an action involving economic principles.
5. Distinguish between probable and improbable economic predictions/forecasts.

ECON 484 The Economics of Immigration
Migration causes, immigration affects on home and destination economies, characteristics of immigrants, and restrictive policies.
Prereq.: ECON 205, ECON 206 3 Cr. DEMAND

ECON 485 Introduction to Econometrics
Model development and statistical testing procedures, applied economic analysis. Model specification, properties of estimation procedures, statistical inference.
Prereq.: ECON 205, ECON 206; IS 242 or STAT 219 or higher. 3 Cr. Fall

Student Learning Outcomes
1. Distinguish between the art and science aspects of econometrics.
2. Recognize the differences between correlation and regression analysis.
3. Develop and estimate a single+equation OLS regression model.
4. Analyze regression results and test hypotheses regarding an underlying economic model.
5. Recognize situations when simple OLS regression analysis is problematic and provide alternatives or corrections.

ECON 486 Introduction to Mathematical Economics
Application of mathematical tools to the problems of micro and macro economic theory.
Prereq.: ECON 406, MATH 221 3 Cr. Fall

Student Learning Outcomes
1. Define and identify mathematical tools and concepts such as functions, derivatives, optimization, and matrix algebra.
2. Associate such abstract mathematical concepts with economics.
3. Apply mathematical tools and concepts to economic and statistical issues discussed in macroeconomics, microeconomics, and econometrics.
4. Differentiate the more abstract approach of mathematics from the more intuitive approach of economics.
5. Evaluate economic models using rigorous mathematical techniques.

ECON 497 Advanced Topics in Applied Economic Theory
Applications of advanced economic theory. Topics selected by instructor. May be repeated with

different topics up to 9 credits.
Prereq.: ECON 405/505 or ECON 406/506 3 Cr. DEMAND

Student Learning Outcomes
1. Apply advanced research methods beyond Econ 405 (Intermediate Macroeconomics) and/or Econ 406 (Intermediate Microeconomics).
2. Construct formal models for economic analysis and/or use experiments to test economic theories.
3. Demonstrate understanding with the research topics at an advanced level chosen by the instructors.
4. Preparation for theoretical courses in economics and/or experimental courses in economics and other related disciplines at graduate (master and Ph.D.) level.

ECON 498 Advanced Topics in Applied Econometrics

Applications of advanced econometric models. Topics selected by instructor. May be repeated with different topics up to 9 credits.
Prereq.: ECON 485-585 3 Cr. DEMAND

Student Learning Outcomes
1. Apply (i) in-depth applications of econometric models in labor economics, international economics, monetary economics, macroeconomics, etc., (ii) advanced econometric modeling beyond Econ 471 (Business and Economic Forecasting) and Econ 485 (Introduction to Econometrics) and (iii) programming for various econometric software.
2. Demonstrate understanding the research topics at an advanced level chosen by the instructors.
3. Preparation for entry-level research positions for business and governments and econometrics courses at graduate (master and Ph.D.) level.

Electrical and Computer Engineering (ECE)

ECE 101 Ethics and the Engineering Profession [Goal 9] (Same as GENG 101)

Major ethical theories; sources of ethics; professional responsibilities; social impact of engineering ethics; teamwork skills; design; engineering careers.
3 Cr. Fall | Spring

ECE 102 Engineering Problem Solving

A programming language appropriate to engineering, such as FORTRAN or C, will be used to model and simulate problems drawn from the engineering disciplines.
Prereq.: MATH 112, MATH 115, MATH 221 Coreq.: MATH 113 3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply their knowledge of mathematics, science, and engineering to engineering problems. Students should have a disciplined approach, a problem solving method, to solve engineering problems.
2. Use the techniques, skills, and modern engineering tools necessary for engineering practice. Students will solve basic problems from mathematics and sciences using computer programming language (such as MATLAB programming) to obtain problem solutions.
3. Design and write a computer program to solve problems containing a few realistic specifications.
4. Write well documented programming codes.

ECE 201 Circuit Analysis I

Current variables and elements, resistive circuits, voltage and current laws, techniques of circuit analysis, network theorems, RL, RC and RLC circuits, computer-aided analysis.
Prereq.: MATH 222, PHYS 234 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Demonstrate and apply the fundamental concepts of current, voltage, and power.
2. Analyze the functional operation of the resistor and independent/dependent voltage and current sources.
3. Apply basic laws (i.e., Ohm's law, Kirchhoff's laws, resistance and source combination, voltage and current division) in the analysis of DC circuits.
4. Apply standard techniques (i.e., mesh and nodal analysis, linearity and superposition, source transformations, and Thevenin's and Norton's theorems) to analyze DC circuits.
5. Analyze and design basic op amp circuits.
6. Understand the concepts of inductance and capacitance, and the functional operation of the inductor and capacitor.
7. Determine the complete response of RL, RC, and RLC circuits.
8. Demonstrate proficiency in the basic operation of the DC power supply, digital multimeter (DMM), digitizing oscilloscope, and waveform generator. Construct circuits containing R's, L's, and C's, and

capture the response with the digitizing oscilloscope.
9. Carry out PSpice simulations (DC bias point and transient analyses) of circuits containing R's, L's, C's, independent/dependent sources, and operational amplifiers.

ECE 202 Circuit Analysis II

Operation amplifiers, sinusoidal steady-state analysis, AC power, magnetically coupled circuits, Laplace transform methods, frequency response, basic filters, two-port networks, computer-aided analysis.
Prereq.: C or better in ECE 201 4 Cr. Fall | Spring

Student Learning Outcomes

1. Apply their knowledge of mathematics, science, and engineering to analyze linear circuits.
2. Practice the profession of engineering using the latest laboratory equipment, including oscilloscopes, function generators, and digital multimeters.
3. Analyze electronic circuits using PSPICE (DC bias point, transient, and AC sweep analyses) of circuits containing R's, L's, C's, transformers, and independent/dependent sources.
4. Produce professional communications appropriate for electrical engineering laboratory work.

ECE 220 Digital Logic Design

Number systems, Boolean algebra, logic gates, combinational circuit, synchronous sequential circuits, and asynchronous sequential circuits, programmable logic and memory devices. Computer aided analysis and simulation. Design.
Prereq.: C or better in ECE 102 4 Cr. Fall | Spring

Student Learning Outcomes

1. Students will have an ability to apply knowledge of mathematics, science, and engineering to apply Boolean algebra to analyze combinational and sequential logic circuits.
2. Students will have an ability to design a system, component, or process to meet desired needs by designing combinational logic circuits and sequential logic circuits.
3. Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice by using modern CAD tools to analyze and design digital circuits.
4. Students will have an ability to communicate effectively by writing professional lab reports.
5. Students will have an ability to apply knowledge of mathematics, science, and engineering to theoretical concepts in the design and analysis of digital logic circuits.

ECE 260 Special Topics in Electrical and Computer Engineering

Special topics in Electrical and Computer Engineering at the sophomore level.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Students will have an ability to identify, formulate, and solve engineering problems.
2. Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
3. Students will have the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

ECE 290 Undergraduate Research in Electrical and Computer Engineering

Investigation of a research problem in Electrical and Computer Engineering, focusing on problem formation and initial research. May be repeated for a maximum of 6 credits.
Prereq.: C or better in ECE 102, ECE 201 and ECE 220
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Students will have an ability to identify, formulate, and solve engineering problems
2. Students will have an ability to apply knowledge of mathematics, science, and engineering to projects.
3. Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

ECE 301 Signals and Systems

Time and frequency analysis. Continuous and discrete time signals, linear time invariant systems, Laplace transform, Fourier analysis, z-transforms, continuous and discrete filters. Computer simulations.
Prereq.: C or better in ECE 102, C or better in ECE 202, C or better in ECE 220, C- or better in PHYS 235; MATH 327 4 Cr. Fall | Spring

Student Learning Outcomes

1. Apply knowledge of signal analysis methods to engineering problems to: Classify signals and systems. Draw the signals in both time-domain and

frequency-domain using the basic operations of signals. Explain the impulse response, transfer function, and frequency response of a system. Compute the response of a system to an input using different methods. Compute the Fourier series, Fourier transform, Laplace transform, and z-transform. Explain the sampling theorem.
2. Analyze and design simple systems: Analyze signals and systems by applying the Fourier transform, Laplace transform, and z-transform. Design a simple filter using MATLAB and/or Simulink.
3. Demonstrate ability to solve engineering problems: Perform experiments with lab equipment such as the spectrum analyzer, Function generator, and oscilloscope. Analyze and interpret the experiment results using appropriate methods. Demonstrate good team work in group lab experiments. Write professional lab reports.

ECE 310 Electronic Devices

Solid state electronics, basic device theory, diodes, bipolar and MOS transistors, power transistors and switches.
Prereq.: ECE 201 3 Cr. Fall | Spring

Student Learning Outcomes

1. Solve electronic device problems.
2. Analyze components for integrated circuits using basic semiconductor material parameters and device geometry.
3. Optimize components for specialized industrial applications.
4. Analyze high power electronic devices, power transistors, and switches.
5. Produce professional laboratory reports.

ECE 314 Digital Electronics

Review of linear circuits, Operational Amplifier, Solid state electronics, Diodes and applications, Three terminal devices, Basic three terminal device applications, Digital electronics, CMOS logic design, Bipolar logic design. Computer simulation.
Prereq.: C or better in all of ECE 102, ECE 202 and ECE 220; C- or better in PHYS 235 4 Cr. Fall | Spring

Student Learning Outcomes

1. Students will have an ability to apply knowledge of mathematics, science, and engineering to analyze transistor circuits used for digital logic, logic circuits, and op-amp circuits.
2. Students will have an ability to apply knowledge of mathematics, science, and engineering to analyze components for integrated circuits using basic semiconductor material parameters and device geometry.
3. Students will have an ability to design and conduct experiments, as well as to analyze and interpret data to test their designs of transistor circuits.
4. Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice by analyzing electronic circuits using SPICE software.
5. Students will have an ability to design a system, component, or process to meet desired needs by designing systems using transistors and digital logic components.
6. Students will have an ability to communicate effectively by producing professional lab reports.

ECE 316 Analog Electronics

Analog systems, small signal modeling and linear amplification, and single transistor amplifier, filters, feedback and stability, multistage amplifiers, advanced op-amps, filters and oscillators, analog and digital integrated circuits. Computer simulation. Design.
Prereq.: C or better in ECE 314 4 Cr. Fall | Spring

Student Learning Outcomes

1. Students will have an ability to apply knowledge of mathematics, science, and engineering to analyze transistor circuits used for analog filters and amplifiers.
2. Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice by analyzing electronic circuits using SPICE software.
3. Students will have an ability to design a system, component, or process to meet desired needs by designing an analog amplifier, filter circuits, and analog electronic systems from basic components.
4. Students will have an ability to design and conduct experiments, as well as to analyze and interpret data to test their designs and analyze the results.
5. Students will have an ability to communicate effectively by producing professional lab reports.

ECE 320 FPGA Based Digital Circuit Design

Register-based design, state machines, hardware description language, FPGA (Field Programmable Gate Array) architecture and design, elementary computer architecture. Computer aided analysis and simulation. Lab with design emphasis, FPGA implementation and applications.
Prereq.: C or better in ECE 102, ECE 220 and ECE 201 4 Cr. Fall | Spring

Student Learning Outcomes

1. Students will have an ability to design a system, component, or process to meet desired needs through design of digital systems at the register transfer level.
2. Students will have an ability to design a system, component, or process to meet desired needs through design of state machines and a simple computer with simple peripherals using an FPGA.
3. Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice through the use of a hardware description language in the design process.
4. Students will have an ability to apply knowledge of mathematics, science, and engineering to analyze the size and performance of the designed digital system including functionality, time analysis, and throughput.
5. Students will have an ability to communicate professionally by producing professional lab reports.

ECE 323 Introduction to Microprocessors

Computer organization, microprocessors, assembly and high-level language programming. Parallel and serial interfaces, interrupts, analog-to-digital, digital-to-analog, and single board microprocessor based design. Labs with design emphasis.
Prereq.: ECE 322 4 Cr. Fall | Spring

Student Learning Outcomes

1. Explain how a microprocessor works and its functionality.
2. Design an interface between a microprocessor and peripheral units and input and output devices.
3. Design an interface between a microprocessor and memory devices.
4. Design and write assembly and C programming language programs to make a microprocessor perform desired tasks.
5. Write professional laboratory reports using appropriate standard software applications.

ECE 380 Engineering Communication

Planning, preparation, and critiquing of engineering reports and presentations. Application of Gantt charts, budgets, Mathcad, MATLAB, and/or other software to engineering projects and communication. Completion of this course with a grade of "C" or better fulfills the upper division writing requirement for the department.
Prereq.: ENGL 191 Coreq.: Select one: ECE 311, ECE 312, ECE 323 or MME 210, MME 330, MME 340, MME 350 2 Cr. Fall | Spring

Student Learning Outcomes

1. Generate and integrate mathematical equations using Matlab, Mathcad, Excel, PowerPoint, Word, etc.
2. Develop Gantt chart schedules and budgets for projects and integrate them into reports and presentations.
3. Efficiently and professionally produce and deliver written engineering reports.
4. Efficiently and professionally produce and deliver oral engineering presentations.
5. Critique professional written and oral engineering presentations.

ECE 390 Junior Undergraduate Research

Investigation of a research problem in Electrical and Computer Engineering, focusing on solution design and prototyping.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Students will have an ability to identify, formulate, and solve engineering problems
2. Students will have an ability to apply knowledge of mathematics, science, and engineering
3. Students will have an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. Students will have an ability to communicate effectively 5. Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

ECE 391 Engineering Electromagnetics

Static and time varying electric and magnetic fields, Maxwell's equations, uniform plane waves, transmission lines, waveguides and antennas. Computer Simulations.
Prereq.: C or better in ECE 202, C or better in ECE 102, C or better in ECE 220; MATH 320 or MATH 321 4 Cr. Fall | Spring

Student Learning Outcomes

1. Apply Maxwell's equations.
2. Analyze EM plane wave propagation in free space and in dissipative media.
3. Solve problems of EM wave reflection and transmission.
4. Analyze and design wave guide and resonators.
5. Analyze wave propagation in transmission line and design impedance match approach.

6. Analyze electrostatic and time varying field.
7. Analyze and design simple antennas.
8. Explain the impact of EM radiation for medical device, weapons, color of skins, and radiation of electronics device.
9. Conduct EM experiments using wave guides, EM sources, antennas, and EM measurement devices.
10. Design and analyze simple EM circuits using CAD tools.

ECE 411 Advanced Analog Electronics

Design of dc-dc and dc-ac power converters using diodes, power transistors, and thyristors. Line frequency diode rectifiers, phase controlled rectifiers and inverters, switch mode converters and inverters, and resonant converters. Computer simulations. Additional project for graduate credit.
Prereq.: ECE 301, ECE 312 3 Cr. DEMAND

Student Learning Outcomes

1. Analyze electronic switches and half-wave and full-wave rectifiers, and perform power computations.
2. Solve AC voltage controller problems.
3. Solve dc-dc converter problems.
4. Design dc power supplies and inverters.
5. Produce professional laboratory reports.

ECE 412 Electrical Machines and Power Systems

Electrical Machines and Power Systems Fundamentals of Electricity, Magnetism, and Circuits, Electrical Machines and Transformers, Generation, Transmission, and Distribution of Electrical Energy.
Prereq.: C or better in ECE 201 3 Cr. DEMAND

Student Learning Outcomes

1. Students will have an ability to apply knowledge of mathematics, science, and engineering through analyzing electricity, magnetism, three phase circuits, active, reactive, apparent power and components for power systems.
2. Students will have an ability to identify, formulate, and solve engineering electrical machines and electrical power systems problems 3. Students will have an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability through designing a smart grid system.
4. Students will have an ability to communicate effectively by writing professional lab reports.

ECE 421 Computer Architecture and Design

Organization at the register level of a single processor computer. Hardware description language, computer interconnection structures, mainframe memory organization, introduction to advanced architecture. Design projects and a project paper. Additional project for graduate credit.
Prereq.: ECE 323 3 Cr. DEMAND

Student Learning Outcomes

1. Describe the organization and architectures of computer systems.
2. Describe the interactions between the computer architecture and its software - issues that influence designs of programming languages, operating systems, and algorithms.
3. Describe parallel computing, pipelining processing, multiprocessing.
4. Describe memory organization and management in computer system.
5. Analyze the performance of different computer architectures and trade-offs between its cost and performance.
6. Design and analyze a simple computer architecture using industry-standard software.

ECE 422 Microcontroller System Design

Internal structure and operation of different types of microcontrollers. Design methodology for their use. Applications, software and hardware. Labs and design projects. Additional project for graduate credit.
Prereq.: ECE 323 3 Cr. DEMAND

Student Learning Outcomes

1. Write computer code in high level languages that properly utilizes the architecture of the microcontroller.
2. Develop stand-alone systems for embedded system designs using sensors and a PC interface.
3. Construct a system that includes a microcontroller system and a PC for various functions such as digital oscilloscope, wave generator, spectral analyzer, capacitive meter, temperature sensor, etc.

ECE 423 Computer Network Architecture

Data communication basics, network architecture and protocols, fundamentals of computer and communciations networks, network simulation and analysis. Special emphasis on hardware. Labs with design emphasis. Additional projects for graduate credit.
Prereq.: ECE 323 3 Cr. DEMAND

Student Learning Outcomes

1. Describe the basic components in computer networks and data/voice systems, their characteristics and functions.
2. Explain the concepts and designs of network architectures and protocols for the physical and data link layers.
3. Assess data communications and networking using the Internet (TCP/IP-based packet switching) and other types of networks (Frame Relay, ATM, Token Ring, etc.) 4. Identify security weaknesses and implement security controls for communication networks.

ECE 431 Digital and Analog Communications

Information and coding, spectral analysis, baseband pulse and digital signaling, communication components, modulations, bandpass communication systems.
Prereq.: ECE 301, ECE 312 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply knowledge of signal analysis methods to communications. i. Apply Fourier transform and Fourier series to analyze signals of communication system. ii. Represent signals in both time domain and frequency domain. iii. Analyze communication system using Fourier methods. iv. Analyze the distortions of signals through a communication channel. v. Identify various amplitude modulations, angle modulation, PCM, digital signaling, and digital modulation.
2. Analyze and design the communication systems. i. Analyze DSB, AM-LC, SSB, VSB amplitude modulation systems. ii. Analyze FM and PM modulation systems. iii. Design a simple modulation system. iv. Analyze and design basic digital communication systems.
3. Demonstrate ability to solve engineering problems i. Use Matlab/Simulink to design and analyze the communication system. ii. Use the equipment such as spectrum analyzer, TIMS301 system, wireless modules, Function generator, and oscilloscope. iii. Analyze and interpret the experiment results using appropriate methods. iv. Demonstrate good team work in group lab experiments. v. Write professional lab reports.

ECE 432 Advanced Communications

Selected topics in telecommunication systems and wireless communications. Computer simulation. Additional project required for graduate credit.
Prereq.: ECE 431-531 3 Cr. DEMAND

ECE 433 Wireless Communications

Wireless communication systems, cellular communication concepts, signal propagation through wireless channels, modulation techniques, effects of slow fading on a digital communication system diversity techniues for fading channels, multiple access techniques for wireless standards. Experiments and projects. Additional projects required for graduate credit.
Prereq.: ECE 431-531 3 Cr. DEMAND

Student Learning Outcomes

1. Analyze the cellular communication concepts.
2. Explain the significance that specific layers the TCP/IP protocol and OSI model have in wireless communications.
3. Identify the different types of wireless communications protocols contained in WLAN standard.
4. Identify the most critical antenna design parameters and understand their impact in wireless communications.
5. Analyze multiple access technologies: CDMA, FDMA, and TDMA.
6. Implement spread spectrum, error control encoders and decoders in a designed hardware system.
7. Design a wireless communication with a simple protocol.

ECE 440 Seminar

Lectures, readings, discussions on current topics. May be repeated on different topics for a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Summarize and critically evaluate professional literature on a select topic.
2. Lead and participate in discussions.
3. Research and present on a selected topic.

ECE 444 Internship

Practical work experience in an Electrical Engineering position. Credit awarded after presentation of a project paper. Prior approval required.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Demonstrate an ability to communicate in a team environment.
2. Apply their knowledge to contribute to a team in planning and executing a project.

3. Demonstrate the use of engineering tools used in the workplace.
4. Produce appropriate technical documentation.

ECE 451 Control Systems

Linear time-invariant systems, time domain analysis, root locus, frequency domain analysis, compensator design, state-space techniques, introduction to digital control. Additional project required for graduate credit.
Prereq.: ECE 301 3 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze and design control systems.
2. Write programs and run simulations in MATLAB.

ECE 452 Digital Control Systems

Analysis and design of discrete-time systems and compensators, state-space approach, implementation of digital control systems. Other topics might include: fuzzy logic, adaptive filtering and non-linear systems. Additional project for graduate credit.
Prereq.: ECE 451-551 3 Cr. DEMAND

Student Learning Outcomes
1. Apply knowledge of mathematics, science, and engineering to analyze discrete-time control systems. a) Discretize a continuous-time system to obtain either a pulse transfer function model or a state-space model. b) Apply z-transform methods to analyze system stability and transient and steady-state behavior.
2. Analyze, design, and test discrete-time control systems using the latest tools, techniques, and skills. a) Use MATLAB/Simulink to analyze, design, and test control systems. b) Design, build, and test digital controllers for the MS-150 Modular Servo System (Feedback, Inc.).
3. Design discrete-time control systems based on their knowledge of mathematics, science, and engineering. a) Design discrete-time control systems using root-locus and frequency-response methods. b) Design discrete-time control systems using pole placement via state-feedback (with and without state estimation).
4. Maintain a professional laboratory notebook.

ECE 461 Senior Design Project

One semester of the capstone experience, small group design project in Electrical or Computer Engineering. Written reports and oral presentations.
Prereq.: CMST 192, ECE 301, ECE 312, ECE 322, ECE 323, ENGL 191, STAT 417 3 Cr. Fall | Spring

Student Learning Outcomes
1. Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
2. Identify, formulate, and solve engineering problems.
3. Communicate effectively.
4. Use the techniques, skills, and modern engineering tools necessary for engineering practice.

ECE 462 Senior Design Project

One semester of the capstone experience, small group design projects in Electrical or Computer Engineering. Written reports and oral presentations.
Prereq.: CMST 192, ECE 301, ECE 312, ECE 322, ECE 323, ENGL 191, STAT 417 3 Cr. Fall | Spring

Student Learning Outcomes
1. Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
2. Identify, formulate, and solve engineering problems.
3. Communicate effectively.
4. Use the techniques, skills, and modern engineering tools necessary for engineering practice.

ECE 471 Digital Signal Processing

Components of DSP system, discrete-time signals and z-transform, Fourier analysis (FFT), FIR and IIR filter design methods, and quantization effects. Computer projects and simulations. Additional project required for graduate credit.
Prereq.: ECE 301 3 Cr. DEMAND

Student Learning Outcomes
1. Analyze and design digital filters.
2. Analyze and solve basic problems in the digital signal processing area.
3. Analyze digital signal using spectrum analysis method with MATLAB.
4. Design digital filters with different methods by using Matlab/Simulink.

ECE 473 Neural Networks

Neural network technology overview, back propagation, conjugate gradient, and cascade-correlation training methods, associative memory, self-organizing nets, adaptive resonance theory net, Hopfield net, constraint satisfaction networks, application and design. Additional project required for graduate credit.
Prereq.: ECE 471 3 Cr. DEMAND

Student Learning Outcomes
1. Design and train back propagation neural networks, self-organizing maps Hopfield neural networks, and other specific types of neural networks.
2. Write programs and run neural network simulations in MATLAB.

ECE 474 Image Processing
Digital image processing system, elements of visual perception, digital image fundamentals, image representation and description, image transform, image enhancement, image restoration, image encoding, image segmentation, image compression, aplications. Additional project required for graduate credit.
Prereq.: ECE 471-571 3 Cr. DEMAND

Student Learning Outcomes
1. Apply theories, algorithms and solutions of digital image perception, acquisition, enhancement, filtering, restoration, and compression.
2. Apply mathematical tools to image processing.
3. Design digital image processing algorithms.
4. Program in MATLAB to implement digital image applications.

ECE 482 Design of Integrated Circuits
Design, and fabrication of integrated circuits. Semiconductor processing and design rules. Designing logic circuits, sense amplifiers, and clock circuits. Yield improvement. Economic and technological trends.
Prereq.: ECE 312 3 Cr. DEMAND

Student Learning Outcomes
1. Design an integrated circuit though a semester-long project.
2. Manage the fabrication process.
3. Synthesize integrated circuit designs using industry leading software.

ECE 490 Senior Research in Electrical and Computer Engineering
Investigation of a research problem in Electrical and Computer Engineering, focusing on problem resolution and final concept.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Students will have an ability to identify, formulate, and solve engineering problems
2. Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
3. Students will have an ability to communicate effectively 4. Students will have an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
5. Students will have an ability to design and conduct experiments, as well as to analyze and interpret data

Engineering Science (ENGR)

ENGR 332 Electronics
DC and AC circuit theorems and analysis, operational ampfliers, rectifiers, power supplies, semiconductors, diodes, and transistors.
Prereq.: PHYS 235 3 Cr. Fall

Student Learning Outcomes
1. Analyze DC circuits and AC circuits.
2. Analyze RCL circuits in time-domain.
3. Analyze circuits involving op-amps, diodes and transistors.
4. Analyze Boolean functions and digital logics with Boolean algebra.
5. Write simple C/C++ code for exercise and projects involving Arduino microcontroller boards.
6. Create, analyze and test circuits in PSPICE simulation.
7. Create, analyze and troubleshoot circuits and projects on breadboard.

ENGR 335 Digital Electronic Measurements
Combined use of tranducers and microprocessors to make physical measurements.
Prereq.: ENGR 332, MATH 222 2 Cr. DEMAND

Student Learning Outcomes
1. Use various actuators and sensors introduced in lectures and labs.
2. Design and build electronic measurement systems involving sensors, actuators and microprocessors or microcontrollers.

3. Write necessary software to acquire, process, and store or transfer data in electronic measurement systems.

ENGR 425 Optical Communication

Principles of optical fiber communication systems, including optical properties of fibers, sources and detectors for communication systems, and network system design.
Prereq.: ECE 311, ECE 312, ENGR 332 3 Cr. Spring

Student Learning Outcomes

1. Apply laws of geometrical and physical optics as they pertain to optical fibers.
2. Calculate mode conditions for plane parallel optical waveguides.
3. Calculate dispersion and distortion effects in fibers and discuss their impact on fiber bandwidth.
4. Compute numerical aperture for step and graded index optical fibers.

ENGR 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

ENGR 447 Optical Design

Computer-aided design of optical systems, aberration theory, optical materials, optical systems, tolerancing for manufacture.
Prereq.: PHYS 333 3 Cr. Even Fall

Student Learning Outcomes

1. Compute the first order properties of an optical system.
2. Recognize and calculate third-order aberrations for a centered axially symmetric optical system.
3. Use raytracing software to calculate aberrations and optimize system performance.
4. Discuss optical tolerances and use raytracing software to compute their effect.

English (ENGL)

ENGL 100 Introduction to Expository Writing

For students wanting a full year of freshman-level writing instruction. Writing processes, self-assessment, and revision strategies. Attention to individual problems. Not a general education course; cannot be taken for university credit after receiving credit for 191.
3 Cr. DEMAND

Student Learning Outcomes

1. Write a coherent paragraph with a main point and supporting evidence.
2. Identify the main point or claim in a short piece of academic writing and evaluate that claim and its supporting evidence and argument.
3. Use standard American syntax and grammar.

ENGL 184 Introduction to Literature

A study of imaginative literature to improve the understanding and increase enjoyment through reading, writing, and discussion. Emphasis on thematic organization, historical period, cultural representation, and type of literature will be option of instructor.
3 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS

ENGL 190 Introduction to Rhetorical and Analytical Writing: Supplemental

Analytical reading, writing, and critical reasoning in various rhetorical situations. Argumentative research project comprising analysis and interpretation of information, texts, and perspectives. This course fulfills the liberal education goal area 1 requirement. For students who do not meet the Accuplacer minimum requirements. Requires an additional hour of tutoring per week.
4 Cr. Fall | Spring GOAL AREA 1: COMMUNICATE ORALLY & IN WRITING

ENGL 191 Introduction to Rhetorical and Analytical Writing

Analytical reading, writing, and critical reasoning in various rhetorical situations. Argumentative research project comprising analysis and interpretation of information, texts, and perspectives.
4 Cr. Fall | Spring | Summer GOAL AREA 1: COMMUNICATE ORALLY & IN WRITING

ENGL 198 Analytical and Research Writing in the Humanities

Analytical reading, writing, and critical reasoning in various rhetorical situations based on literature. Argumentative research project comprising analysis and interpretation of information, texts, and perspectives found in literature. This course fulfills the liberal education goal area 1 requirement.

4 Cr. Fall | Spring GOAL AREA 1: COMMUNICATE ORALLY & IN WRITING

ENGL 201 Classics of Literature

Introduces non-English majors to in-depth study of rich literary traditions of Great Britain, the United States, and/or other nations or cultures; including at least two genres and historical periods. Does not count toward the English major or minor.
3 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS

ENGL 202 Myth, Legend, and Sacred Literatures

A study of mythology based on Greek, Roman, other legends in relation to literature. Sacred texts may be included.
3 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS

ENGL 203 Gender Issues in Literature (Diversity)

In works by female and male writers, course explores literary depiction of gender roles, gender and sexual identity/orientation, and/or gender relations in context of social structures and values.
3 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS

ENGL 205 Bible as Literature

Selections from the Bible that relate to literary traditions of subsequent centuries. Literary forms in the Old and New Testaments (e.g. Psalms and Hebrew poetry).
3 Cr. Fall

Student Learning Outcomes

1. Analyze significant portions of each of the major literary genres of the Bible.
2. Integrate information from the Bible to support the reading of literature from western culture.
3. Compare and contrast implications of the Biblical texts to contemporary thought and art.
4. Apply critical thinking to Biblical concepts.

ENGL 215 American Indian Literature (Diversity)

Contemporary American Indian literature in poetry, short stories, essays and novels. Consideration of tradition, history and current realities from an Indian viewpoint as well as negative stereotypes and discrimination that Native people face.
3 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS

ENGL 216 African American Literature (Diversity/RIS)

Studies in African American literature from the slave narrative to contemporary writers. Content and focus to vary.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

ENGL 280 Understanding Video Games

Academic study of videogames. History, survey, narratives, cultural and social implications of gaming, basic design. Procedural rhetoric and persuasive games.
3 Cr. DEMAND GOAL AREA 6: HUMANITIES AND FINE ARTS

ENGL 291 Introduction to Analytical and Rhetorical Writing (for transfer students)

Attention to analytical, argumentative, and research writing. Specific requirements based on individual need. For transfer students who have met at least 50% of English 191 objectives through previous course work in writing. By permission only.
2 Cr. Fall | Spring GOAL AREA 1: COMMUNICATE ORALLY & IN WRITING

ENGL 300 Introduction to English Studies

English as a field of study with emphasis on literary and rhetorical analysis. Strategies by which we interpret and create texts, including poetry, fiction, drama, and essay. This course is a prerequisite for all 400-level courses.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Use the form of analysis called close reading, based on recognizing nuances in vocabulary and language, tone, and imagery.
2. Differentiate among points of view, perspectives, speakers in the text, and readers, whether the self or secondary critics. In literary texts, also differentiate between author and narrator.
3. Invent questions both for class discussion and for writing, especially by situating texts in a range of contexts--theoretical, literary, rhetorical, social-historical, and applying the terms and concepts appropriate for those contexts.
4. Interpret texts flexibly, understanding how multiple meanings are possible and, conversely, how individual interpretations sometimes can be wrong.
5. Create academic essays and written exercises that practice interpretive process, use logic and evidence

to support interpretations, and show rhetorical awareness of writing for a particular purpose, audience, and situation.
6. Demonstrate knowledge of the differences among genres of texts by analyzing how their structural differences create differences in cultural expression.
7. Develop a working knowledge of the language of poetry and the literary analysis of poetry by applying appropriate terminology and concepts in reading a wide survey of poems; grasp and interpret metaphor.
8. Analyze symbolic artifacts, including texts, rhetorically for their purpose, effects, claims, appeals, warrants, evidence, and rebuttals.
9. Analyze symbolic artifacts, including texts, by contextualizing them appropriately as they arise from and represent oral, written, print, and digital culture.

ENGL 302 Holocaust Literature

Literature of the Jewish Holocaust and its historical context; examines nonfiction writing such as journals and other first-hand accounts as well as fiction, poetry, and essays.
3 Cr. Fall

Student Learning Outcomes

1. Identify various genres of literature related to, and explain the ways in which they contribute to our understanding of the Jewish Holocaust.
2. Explain how Jews were the primary victim group of the Holocaust, both in terms of their suffering and their resistance.
3. Demonstrate an appreciation for the resilience and richness of Jewish life, culture, and religion.
4. Describe basic historical context of the Jewish Holocaust.
5. Apply lessons from the Holocaust to current realities and moral decision making.

ENGL 303 Global and Regional Topics in Literature

Literature of a region or nation, excluding the United States and England. May consider a specific period, genre, or theme. May be repeated with a different topic.
3 Cr. DEMAND

Student Learning Outcomes

1. Compare and interpret different genres of literary texts from global regions such as Africa, the Caribbean, and Asia.
2. Demonstrate an awareness of the works of writers from diverse cultural traditions.
3. Analyze the dynamic connections between culture, history and texts to situate literary texts within specific historical, aesthetic, socio-political, ethical and other contexts.
4. Formulate arguments about non-Western literature using close reading and appropriate literary terminology while synthesizing materials from different texts and contexts.
5. Engage respectfully with others who hold diverse perspectives.

ENGL 304 Literature and Film

Study of literature and film made from that literature. Uses film to define and demonstrate literary techniques and how they are changed and adapted by film.
3 Cr. DEMAND

Student Learning Outcomes

1. Classify the genres of specific pieces of literature and their film adaptations and assess their effectiveness as instances of the literary and filmic genres.
2. Use literary terms appropriately when discussing and writing about literature and use film terms appropriately when discussing and writing about film adaptations of that literature.
3. Comprehend in general how cinematography and camera work enhance narrative and character development and how visual metaphors contribute to meaning in film adaptations of literary texts; examine the cinematography, camera work, and visual metaphors of specific film adaptations to evaluate their effectiveness.
4. Understand how narrative elements in literature are expanded, cut, condensed, rearranged, and cinematic equivalents found so that the narratives fit the running time of films and the artistic vision of the filmmakers; evaluate the effectiveness of specific films based upon the adaptation of narrative to the media and process of filmmaking rather than +faithfulness+ to original texts.
5. Identify and evaluate connections between film adaptations and the literary texts upon which they are based, taking into account the differences between the media of print and film as well as issues concerning adaptation (such as point of view, narrative voice, shifts in historical and cultural audiences, and differences between the single literary author vs. collaboratively produced films).
6. "Formulate arguments about literary adaptations (ranging from ""faithful"" adaptations to loose

adaptations, as well as those that update the narratives to accommodate modern cultural expectations) using close reading and theoretical approaches concerning film adaptation."

ENGL 305 Lesbian, Gay, Bisexual, Transgender Literature (Diversity)

Literary representations of LGBT and other non-dominant sexualities, gender identities, and relationships. Particular attention to literary strategies and theoretical approaches in historical and social context.
4 Cr. DEMAND GOAL AREA 6: HUMANITIES AND FINE ARTS

ENGL 306 Rhetoric in Popular Culture

Rhetorical influences of popular culture; critical interpretation and analysis of print, digital, and visual texts; multi-media technologies; and organizational systems.
3 Cr. Fall | Spring GOAL AREA 2: CRITICAL REASONING | GOAL AREA 6: HUMANITIES AND FINE ARTS

ENGL 307 African Literature

A survey of contemporary African literature from the following regions of the continent: East Africa, West Africa (French and English-speaking), and South Africa.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze the link between craft and social responsibility, as gainsaid by the authors' literary traditions.
2. Identify and explicate stylistic and philosophical similarities and dissimilarities, as gathered from texts as well as other primary and secondary sources.
3. Analyze the impact of historical forces, such as colonialism, neo-colonialism, apartheid, etc., on the psychology of the colonizer and the colonized, tribal relations within the culture, and on territorial boundaries.
4. Identify the importance of cultural practices and beliefs to the fictional creation of selected authors.
5. Elucidate selected literature, where applicable, in light of historical, psychological/psychoanalytic, and feminist critical approaches.

ENGL 308 Introduction to Rhetorical Theories

Classical and modern rhetorical theories and concepts applied to contemporary cultural contexts and rhetorical situations. Critical approaches to analyzing historical, popular or scholarly written, visual and multi-modal texts.
4 Cr. Fall

Student Learning Outcomes

1. Analyze shifts in rhetorical theory within historical time periods.
2. Examine rhetorical figures and concepts from classical times to the present.
3. Analyze and write about texts and materials examined in class.
4. Analyze rhetoric's influence on decisions, actions, and identities.
5. Apply classical rhetorical frameworks to contemporary artifacts and contexts.

ENGL 310 Early American Literature Through 1830

Studies in American authors and literary and rhetorical traditions from the beginning to 1830.
4 Cr. Fall

Student Learning Outcomes

1. Identify the significant concerns of early American authors.
2. Compare the different authors and genres of early American literature.
3. Recognize how early American texts were influenced by, and also exerted influence upon, such sociohistorical circumstances as the colonization of America, the Revolutionary War, and the Declaration of Independence.
4. Develop critical thinking and writing skills in their analyses of texts through classroom discussions as well as writing assignments.

ENGL 311 American Literature: 1830-1900

Studies in American literary and rhetorical traditions and movements from the early nineteenth-century to 1900.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and compare the main features of major literary movements in Nineteenth-Century American Literature, such as romanticism, transcendentalism, realism, and naturalism.
2. Write essays that analyze important works of Nineteenth-Century American Literature.
3. Compose essays that synthesize the complex literary themes and styles inherent in Nineteenth-Century American Literature.
4. Compare and contrast the rich array of

nineteenth-century American literary genres, such as literary nonfiction, the essay, the short story, the romance and novel, and poetry, etc.
5. Analyze at least five distinct literary writing styles present in Nineteenth-Century American Literature.

ENGL 312 Twentieth Century American Literature Through World War II

Studies in twentieth-century literary movements and authors through World War II.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Examine important literary and cultural themes inherent in Modern American Literature through World War II.
2. Analyze at least four distinct approaches to prose fiction in Modern American Literature through World War II.
3. Compose analytical essays on significant works of Modern American Literature through World War II.
4. Formulate explications of the significance of themes such as the wasteland, cultural fragmentation, the loss of self, and alienation in Modern American Literature through World War II.
5. Differentiate between different approaches to writing poetry in Modern American Literature through World War II.

ENGL 313 American Literature Since World War II

Recent American literature of all genres (poetry, drama, short story, novel, essay, and mixed genres) from World War II to the present, represented selectively.
4 Cr. Spring

Student Learning Outcomes

1. Identify the multiple genres of contemporary literature, including works that mix genres, and analyze their particularities of style and content.
2. Use literary terms appropriately when discussing and writing about contemporary American literature.
3. Trace the literary history of the period, identifying the emergence in American literature of such cultures as Japanese-American or Nuyorican and analyzing the particular representation of these cultures in innovative literature.
4. Identify and evaluate connections between American texts and historical events such as the Civil Rights movement, the second wave of feminism, the gay rights movement, the Vietnam Conflict, 9-11 and the Iraq War, the passage of Loving v. Virginia, Roe v Wade and the Patriot Act as well as a host of other pertinent cultural events.
5. Identify and evaluate connections between American texts and artistic movements such as Confessional Poetry, Slam Poetry, journalistic fiction, Postmodernism, among the many aesthetic projects of the era.

ENGL 315 Advanced Studies in American Indian Literature

In-depth study of some aspect or genre of American Indian literature such as rhetorical or popular prose, poetry, short fiction, the novel, or the autobiography.
Prereq.: ENGL 215 4 Cr. DEMAND

ENGL 316 Advanced Studies in African American Literature

Investigates different cultural, historical, or disciplinary traditions in relation to the work of selective African-American authors.
4 Cr. DEMAND

Student Learning Outcomes

1. Interpret texts as readers and writers in light of fictional elements (narrative point of view, imagery, tone, etc).
2. Identify the impact of historical and socio-economic events, such as the Industrial Revolution (1890-1910), Southern Reconstruction (1867-1877), and the Exodus between 1910 and 1920 from the South to the North, etc., on the social and political milieu, as illuminated in texts.
3. Analyze the role of folk culture, such as storytelling, to both literary production and craftsmanship.
4. Elucidate the import of race, gender, and ethcicity to the eye-view of the author.
5. Analyze stylistic and philosophical points of convergence and divergence, as gathered from texts as well as other primary and secondary sources.

ENGL 317 Studies in Chicano/a American Literature

Historic and contemporary readings in Mexican American/Chicano/a literature in poetry, short stories, essays and novels. Consideration of tradition, history, and current realities of the Chicano/a viewpoint in literature.
4 Cr. DEMAND

ENGL 321 British Literature: Medieval

The emergence of literary traditions from Beowulf through the fifteenth-century, with special emphasis on Chaucer.
4 Cr. Odd Fall

Student Learning Outcomes
1. Identify and compare different genres of medieval literature.
2. Use literary terms appropriately when discussing and writing about medieval literature.
3. Analyze differences between early and late medieval literature.
4. Identify and evaluate connections between medieval literary texts and historical events such as the conversion of the Anglo-Saxons, the Norman Conquest, the Black Plague, etc.
5. Formulate arguments about medieval literature using close reading and theoretical approaches such as historicism, feminist criticism, etc.

ENGL 322 British Literature: Renaissance

Literature of the sixteenth-century and the seventeenth-century to the Restoration, concentrating on poetry, drama, and selected prose works in their historical and cultural contexts.
4 Cr. Fall | Spring

Student Learning Outcomes
1. Work closely with the significant genres of literature of the period and the particular features that mark each genre.
2. Read rich and complex texts and react to them, both in class discussion, and in writing, normally in both daily readers' journals and critical papers.
3. Develop their command of literary terms relative to the literature and movements of the period and use this professional terminology appropriately in class discussion, oral presentations, and writing.
4. Research critical questions about the literature and present the results of their research in critical papers and/or oral presentations to the class.

ENGL 323 Shakespeare I

The histories, comedies, and tragedies.
3 Cr. Fall

Student Learning Outcomes
1. Paraphrase and interpret key passages in Shakespeare's works when discussing and writing about Shakespeare.
2. Identify and compare different genres of Shakespeare's dramas and/or poems.
3. Use literary terms appropriately when discussing and writing about Shakespeare's dramas and/or poems.
4. Investigate historical issues impinging on the literature, such as the sources of the works, the cultural contexts, the theatrical context, etc.
5. Analyze Shakespeare's works using internal textual evidence and external criteria such as historical evidence and theoretical criticism.

ENGL 325 British Literature of the Restoration and Eighteenth Century

The reinvention of literary forms in the context of artistic, political, and intellectual culture between 1660 and the French Revolution. Swift, Pope, satire, and the origins of literary criticism.
4 Cr. Even Fall

Student Learning Outcomes
1. Read texts closely, showing sensitivity to vocabulary and language, tone, and imagery in reading texts; differentiate among points of view of characters, narrators, authors, readers (including the self), and critics.
2. Identify and investigate connections between literary texts and historical developments from the period, such as media revolution, postwar trauma and culture wars, modernity, the enlightenment.
3. Identify and compare the kinds of textual genres appearing during the period of the Restoration and eighteenth-century, analyzing how each form (especially satire) was used by the culture, and how classifications of literary and non-literary forms emerged and changed.
4. Use multiple contexts for interpretation and developing questions, e.g. historical, literary, aesthetic, theoretical, social/political, or ethical.
5. Create academic essays and written exercises that practice investigative, critical thinking, and interpretive processes, from formulating questions to arriving at insights, using literary terms appropriately.
6. Gain confidence in thinking independently of the instructor and of published texts, especially by recognizing when they have ideas.
7. Begin to relate to works that embody unfamiliar behaviors, values, perspectives, and ambiguities, especially by developing an imagination for historically distant experiences.
8. Compare and contrast literary styles from the eighteenth century with earlier and later periods, building acquaintance with a broad range of the literature in the field, both in terms of it diversity and its integrating traditions (the continuities that

bring it together).
9. Develop an awareness of language as constantly changing and fundamental to cultural expression and apply this recognition in interpreting early modern texts.
10. Debate the nature of the canon of classics and of canon-formation, including issues of culture, history, personal identity, and the nature of literature.

ENGL 326 British Literature: Romantics

The literary works, historical and cultural contexts, and criticism of Wollstonecraft, Blake, the Wordsworths, Coleridge, Byron, the Shelleys, Keats, and others. Focus of the course may vary.
4 Cr. Even Spring

Student Learning Outcomes

1. Analyze Romantic ideas about aesthetics, particularly in terms of poetry and the figure of the poet through readings, class discussions, papers and essay exams.
2. Engage with historical events like the French Revolution and the Abolition movement and their effect on the Romantic period writers through reading, PowerPoint presentations, which will provide a visual dimension to student learning, and class discussions.
3. Engage in close readings of particular poems, novels and non-fiction writings through frequent class discussions.
4. Engage with the discourse of the English profession by writing literary analysis for an interested audience.
5. Craft carefully reasoned, well-organized essays analyzing particular texts in a series of papers and/or in-class writings.

ENGL 327 British Literature: Victorian

Literary works, historical and cultural context, and criticism of novelists, poets, and essayists of the Victorian age, such as Dickens, G. Eliot, Hardy, Tennyson, and Arnold.
4 Cr. Fall

Student Learning Outcomes

1. Identify and compare different genres of Victorian literature as well as their typical structural elements.
2. Use literary terms appropriately when discussing and writing about Victorian literature.
3. Analyze particular poems, novels and non-fiction writings through frequent class discussions using the critical practice of close reading.
4. Formulate arguments about Victorian literature using close reading and theoretical approaches such as historicism, feminist criticism, etc.
5. Identify and evaluate the connections between Victorian literary texts and cultural documents and historical events and recurring social issues, such as the status of children, women+s rights, men+s identity, the empire, literacy, etc.
6. Formulate and present a personal position on aesthetic issues from the Victorian age, such as the literary canon, popular vs +high+ art, art for art+s sake, etc.
7. Analyze language as constantly changing and fundamental to cultural expression, with sensitivity to differences between current and Victorian usages.
8. Construct and present a reading of Victorian texts using digital tools.

ENGL 328 British Literature: Modern and Contemporary

Literary works, historical and cultural contexts, and criticism of novelists, poets, essayists, and playwrights of twentieth century Great Britain, such as Joyce, Woolf, Yeats, Eliot, Lessing, and Stoppard.
4 Cr. Spring

Student Learning Outcomes

1. Identify and analyze different genres of canonical and non-canonical 20th-21st century British literary texts.
2. Use literary terms appropriately when discussing and writing about modern and contemporary British literature.
3. Identify and evaluate the connections between modern British literature and historical events such as the great wars, women's liberation movements, decolonization, etc.
4. Formulate arguments about modern and contemporary British literature using close reading and theoretical approaches such as feminist criticism, postcolonial criticism and cultural studies.

ENGL 331 Advanced Academic Writing

Multiple definitions, purposes, audiences, genres and ethics in academic writing; relationship to workplace and civic writing. Historical and theoretical assumptions. Writing practice in various written and electronic genres.
Prereq.: ENGL 191 4 Cr. Fall | Spring

Student Learning Outcomes

1. Develop skills in managing varied genres of academic writing: such as exploratory essay,

research report, annotated bibliography, article/book review.
2. Develop skills in writing for different purposes: explanation, persuasion, analysis, reflection.
3. Develop skills in analyzing audiences and adapting writing to different audiences.
4. Develop skills in electronic communication: accessing and using/responding to online materials, wikis, listservs, blogs, chats as appropriate to academic writing.
5. Develop enhancement of understanding and applications of rhetorical theory to academic writing situations.
6. Develop increased capacity to address ethical concerns in writing and technology appropriate to academic communities.

ENGL 332 Writing for the Professions

Rhetorical situations, purposes, audience and ethical issues in workplace writing genres. Collaboration processes, layout/format conventions, clarity and correctness. May include oral presentations, usability testing, portfolios.
Prereq.: ENGL 191 4 Cr. Fall | Spring

Student Learning Outcomes

1. Develop skills in managing varied genres of writing in business/corporate organizations: such as memos, research reports, letters, manuals, resumes, fliers, newsletters, web pages and other public relations materials.
2. Develop skills in writing for different purposes: explanation, persuasion, analysis, reflection.
3. Develop skills in analyzing audiences and adapting writing to different audiences in terms of formatting and readability.
4. Develop skills in analyzing writing situations: styles, conventions, format expectations and alternatives.
5. Develop skills in electronic communication: accessing and using/responding to online materials, listservs, information/data sources, visual formatting.
6. Develop skills in collaboration in group writing projects.
7. Develop increased capacity to address ethical concerns in writing and technology in professional communities.

ENGL 333 Advanced Civic Writing

Review of rhetorical theory. Purposes, audiences, ethical issues in various writing and electronic genres related to political/civic engagement. Attention to conventions of style, layout and format, clarity and correctness.
Prereq.: ENGL 191 4 Cr. Fall | Spring

Student Learning Outcomes

1. Develop skills in managing varied genres of public/civic writing: such as newspaper letters, opinion columns, government reports and rationales, reviews, proposals, and action documents.
2. Develop skills in writing for different purposes: explanation, persuasion, analysis, reflection, entertainment, stylistic performance, demonstrations.
3. Develop skills in analyzing audiences and adapting writing to different audiences.
4. Develop skills in electronic communication: accessing and using/responding to online materials, blogs, reviews, and critiques.
5. Develop enhanced understanding of rhetorical theory and its applications to public discourse through analysis and document preparation.
6. Develop increased capacity to address ethical concerns in writing and technology relating to public/civic discourse.

ENGL 334 Grammar and Style in Writing

Writing about current issues with an emphasis on learning to recognize and describe grammar and the parts of speech; designed to prepare students for writing, tutoring, and teaching.
Coreq.: Cr. Fall

Student Learning Outcomes

1. Write in a variety of genres for specific audiences and purposes 2. Write with an awareness of the cultural implications of standardizing English usage 3. Recognize sentence patterns and their implications for style in academic writing and everyday discourse 4. Describe language choices in written work through grammatical terms 5. Apply editing skills with an awareness of audience and context 6. Develop proficiency in working with style handbooks in relation to diverse backgrounds in English language

ENGL 335 Grammar and Usage for Writers

Cultural and rhetorical perspectives. English grammar, mechanics, and usage practiced in the United States.
4 Cr. Fall

Student Learning Outcomes
1. Analyze debates about standardizing English usage as a historical and and political construct with cultural implications.
2. Apply the grammatical structures and punctuation rules in academic texts from a rhetorical-contextual perspective.
3. Analyze writing and apply rules of grammar, punctuation and mechanics of standardized English from a rhetorical-contextual perspective.

ENGL 340 Creative Writing: Drama
The writing of plays at the beginning level.
Prereq.: ART 198, ENGL 191, ENGL 198, ENGL 291, HONS 160, TH 198 3 Cr. Fall

Student Learning Outcomes
1. Analyze representative texts of various styles within the genre, as well as a play production.
2. Develop a working knowledge of the vocabulary of the craft of writing for the stage, including, dialogue, plot, character, stage direction and approaches to theatrical storytelling.
3. Hear their work read aloud, and listen to the work of their peers read aloud, gaining a basic understanding of performative texts through group workshop.
4. Evaluate their own work and the work of their peers.
5. Produce, revise and rewrite their own original plays for the stage.

ENGL 341 Creative Writing: Nonfiction
Principles, practices and purposes of nonfiction creative writing, including focused reading and analysis of relevant nonfiction prose.
Prereq.: ART 198, ENGL 190, ENGL 191, ENGL 198, ENGL 291, HONS 160, TH 198 4 Cr. Fall

Student Learning Outcomes
1. Develop a working knowledge of representative texts and writers within the genre.
2. Develop a working knowledge of the vocabulary of craft, including the effective use of significant/concrete detail, scene, dialogue, narrative, reflection, structure and figurative language.
3. Evaluate and analyze texts within the genre.
4. Produce, revise, and rewrite their own work in the genre.
5. Evaluate, consider, and respond to the work of their peers in group workshop.
6. Consider the complex issues of memory and truth in creative nonfiction.
7. Assess their own progress and writing process as writers within the genre.

ENGL 342 Creative Writing: Fiction
Practice of fiction writing. Description, dialogue, and characterization in the complete short story. Reading of contemporary fiction as models.
Prereq.: ART 198, ENGL 191, ENGL 198, ENGL 291, HONS 160, TH 198 4 Cr. Fall | Spring

Student Learning Outcomes
1. Develop a working knowledge of representative texts and writers within the genre, and evaluate and analyze those texts.
2. Develop a working knowledge of the vocabulary of craft, including the effective use of significant/concrete detail, scene, dialogue, plot, point of view and figurative language.
3. Produce, revise, and rewrite their own work in the genre.
4. Evaluate and respond to the work of their peers in group workshop.
5. Assess their own progress and writing process as writers within the genre.

ENGL 343 Creative Writing: Poetry
The writing of poetry at the beginning level.
Prereq.: ART 198, ENGL 190, ENGL 191, ENGL 198, ENGL 291, HONS 160, TH 198 3 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze representative texts and writers within the genre.
2. Develop a working knowledge of the vocabulary of poetry, including the effective use of significant precise word choice, use of descriptive detail, sensory imagery, voice, and figurative language.
3. Evaluate and respond to the work of their peers in group workshops.
4. Produce, revise and rewrite their own work within the genre.
5. Assess their own progress and writing process within the genre.

ENGL 344 Creative Writing: Screenwriting
Introduction to writing scripts for film. Analysis of successful screenplays. Writing and revision of original screenplays.
3 Cr. Fall

Student Learning Outcomes
1. Identify standards in screenplay formatting, structure and writing process.
2. Analyze successful screenplays.
3. Produce texts suitable for external review.

ENGL 351 Introduction to Language Arts Pedagogy Theory

Theory, pedagogy, and practice: rhetorical situations, composition, literature, and languages applied to 5-12 grade teaching. Initial preparation for field experiences/student teaching and licensure. Demonstrate development through portfolio.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Design reading and writing lessons for middle-level students that coincide with their cognitive and socio-emotional development.
2. Understand and apply theories associated with responding to literature.
3. Develop language arts curriculum that incorporates national and state standards.
4. Create and apply a variety of assessment tools to gauge middle level students' learning.

ENGL 353 Introduction to Writing Center Theory and Practice

Writing center scholarship and pedagogy: literacy theory, composition theory, history of individualized writing instruction; diversity and politics of literacy education; development of reflective tutoring practices. Required of all undergraduate students seeking employment as tutors in the writing center.
Prereq.: ENGL 191 4 Cr. Spring

Student Learning Outcomes
1. Evaluate writing center activity using basic theoretical perspectives from the fields of writing center studies, ESL, and composition.
2. Analyze various writing assignments, rhetorical situations, and audiences.
3. Evaluate ethical issues regarding professionalism, confidentiality, and the use of technology in the writing center.
4. Apply appropriate strategies for tutoring specific populations of students.

ENGL 361 Introduction to Linguistics Systematic Study of Language

Systematic study of language: nature and acquisition of language; linguistic analysis of sound patterns; word and sentence structures, meanings; writing systems; linguistic variation, history and language families.
4 Cr. Fall | Spring

Student Learning Outcomes
1. Identify, describe, analyze, and explain the role of the brain and the mind in language production and comprehension.
2. Identify, describe, and analyze words into morphemes, into syllables, and diagram sentences.
3. Identify, describe, analyze, and classify consonants and vowels according to articulatory parameters and phonological processes in historical and contemporary English that have an impact on speaking, reading, and spelling.
4. Identify, describe, analyze, and explain the factors involved in first and second language acquisition
5. Identify, describe, analyze, and explain how linguistics variable contribute to social variables.

ENGL 400 Special Problems in English

A seminar or conference course for advanced students wishing to work out a special problem in academic area.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Identify a problem for research or analysis.
2. Describe and analyze texts using approaches such as literary, rhetorical, or cultural criticism, etc.
3. Evaluate and respond critically to the identified problem by writing or creating work.

ENGL 402 Literary Theory and Criticism

The concepts which apply to such problems as the writer's creative process, the various purposes of literary art, form, and technique, and the responses that literature elicits.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Identify the significant issues in the field of literary theory and criticism.
2. Compare different approaches to literary theory and criticism, such as formalism, cultural studies, and deconstruction.
3. Apply different theoretical and critical frameworks to their own readings of literary texts.
4. Develop critical thinking and writing skills in their analyses of texts through classroom discussions as well as writing assignments.

ENGL 403 Digital Rhetoric, Discourse, and Culture

Impact of technology in humanities and English studies: history, theory, and practice of electronically mediated communication; print and electronic literacies; modes of discourse and theories of language, community, and self.
3 Cr. Fall

Student Learning Outcomes

1. Apply an array of digital writing and media tools, such as wikis, blogs, podcasts, content management systems, and social networking tools.
2. Recognize the rhetorical dimensions of digital technologies to consider the ways real people and communities use them in socially and culturally motivated ways.
3. Explain the historical and theoretical backgrounds concerning the shift from print to electronic literacies.
4. Evaluate the specific nature of their own print and digital literacies and how those literacies help to construct their identity and connect them with various communities.
5. Explain the ways in which present-day reading and writing practices and writing spaces affect our notions of text, authorship, and publication.
6. Analyze how emergent media over the centuries have refashioned or remediated older media.
7. Analyze how new digital media are converging and are changing our culture and our definitions of self.
8. Interpret social, cultural, and rhetorical issues concerning digital technology and society using appropriate theories.

ENGL 405 Principles and Theories of Professional Communication

Historical, cultural and social exploration of Professional Communication as a situated discourse practice in job and portfolio preparation. Consent of instructor required for undergraduates.
3 Cr. Spring

Student Learning Outcomes

1. Use foundational terminology, theories, and applications used in the professional communication field, enabling students to both define the field as well as identify the relationship between the field and rhetoric.
2. Translate the history, theories, research, technology, and practices of professional communication into professional identities and abilities to become workplace practitioners and researchers.
3. Apply cultural and social perspectives of language and technology to analyze the rhetorical dimensions, functions, and efficacy of workplace artifacts and communication practices.
4. Use methods, concepts, technologies, and theories used in the professional communication field to construct research questions regarding a workplace communication issue, conduct research on that issue, and produce an effective solution to the issue.

ENGL 414 Advanced Studies in American Multicultural Literature

In-depth study of the literature of one or more groups, such as American Indian, African American, Asian American, Jewish American, Chicano/a Mexican American, and European American.
Prereq.: ENGL 215, ENGL 216, ENGL 315, ENGL 316, or ENGL 317. 3 Cr. DEMAND

Student Learning Outcomes

1. Interpret texts as readers and writers in light of fictional elements (narrative point of view, imagery, tone, etc.).
2. Locate and explicate stylistic and philosophical similarities and dissimilarities, as gathered from texts as well as other primary and secondary sources.
3. Analyze the importance of folk culture, such as storytelling, to both literary production and craftsmanship.
4. Assess the import of gender, race, ethnicity, or nationality to the eye-view of the author.
5. Identify the causes and effects of bifurcated identities.

ENGL 423 Shakespeare II

The texts, background and criticism of Shakespeare.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze significant portions of Shakespeare's plays and/or poems.
2. Use literary terms appropriately when discussing and writing about Shakespeare's plays and/or poems.
3. Describe or use methods and data by which literary scholars investigate Shakespeare's plays and/or poems.
4. Summarize and evaluate scholarly criticism on Shakespeare's works.
5. Make and defend judgments about Shakespeare's works based on internal evidence and external criteria such as historical evidence and theoretical criticism.

ENGL 424 Milton

Comus, Paradise Lost, Paradise Regained, Samson Agonistes, Areopagitica, and the minor poetry.
3 Cr. Spring

Student Learning Outcomes

1. Develop reading techniques, such as reading slowly, reading texts several times, reading aloud when possible, and annotating texts.
2. Further develop their command of literary terms and concepts and use them appropriately in class discussion, oral presentations, and writing.
3. Research critical questions about the literature and present the results of their research in critical papers and/or oral presentations to the class.

ENGL 430 Principles of Document Content and Design

Theoretical and cultural perspectives on the visual content and design of genres and media in Professional Communication. Instruction and practice in creating print and digital workplace documents.
3 Cr. Spring

Student Learning Outcomes

1. Apply foundational definitions, principles, and theories of document design as a method of communicating content and connect that knowledge to theories of rhetoric and the technologies used to design documents.
2. Identify the design qualities (pages, type, graphics, color, forms, etc.) of documents in particular genres and/or media and evaluate the rhetorical effectiveness of those qualities from a cultural perspective.
3. Apply digital technologies to create rhetorically effective artifacts using appropriate genres and principles of document design.

ENGL 431 The Rhetoric of Style

Theories, principles, and practices of style and its political and ethical relationship to the prodution of meaning in a variety of discourse communities. Development of effective stylistic competencies and evaluation of style in cultural artifacts.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Evaluate the rhetorical effectiveness of a diverse range of texts (such as editorials, blogs, websites, television shows, movies, videos, and advertisements) based upon stylistic characteristics.
2. Explain how socio-cultural and market contexts shape the meaning of rhetorical styles.
3. Analyze the formal properties that constitute a style.
4. Recognize how a rhetoric of style works to construct identities and communities, negotiate power, and create knowledge about social values and beliefs.
5. Situate their own compositional style within a rhetorical framework.

ENGL 432 Rhetoric for Diverse Audiences

Composing and delivery strategies for diverse audiences. Writing for audiences of different cultures, ethnicities, gender and sexual identities, and abilities. Cultural sensitivity and the ethical implications of intercultural rhetorical situations.
Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Evaluate the expectations of a variety of culturally diverse audiences.
2. Apply rhetorical principles to communicate with diverse audiences 3. Respond ethically in intercultural rhetorical situations 4. Develop composing strategies for diverse audiences
5. Evaluate rhetorical artifacts with cultural competence

ENGL 433 Advanced Theories of Rhetoric

Investitation of rhetorical theories and concepts of one or more major rhetorical figures from both historical and contemporary perspectives and how they shape practices of literacy and writing. Focus on writing as theoretical construct.
Prereq.: ENGL 308 4 Cr. Spring

Student Learning Outcomes

1. Evaluate contemporary contexts using rhetorical theory and concepts.
2. Analyze texts (such as editorials, blogs, websites, television shows, movies, videos, and advertisements) using rhetorical theories and concepts.
3. Incorporate rhetorical theories and concepts to analyze situations or solve problems.
4. Compose written texts integrating rhetorical theories and concepts.

ENGL 434 Editing and Publishing

Editor's responsibilities and relationships to writers, political and ethical dimensions of editing and editorial processes, and changing purposes and

rhetorical constraints of writing for publication.
4 Cr. Spring

Student Learning Outcomes
1. Adapt knowledge of a copyeditor+s responsibilities and principal tasks to suggest practical strategies an editor can adopt to forge a working relationship with a writer.
2. Select correction codes and symbols with respect to readability, style and correctness as they pertain to publication standards.
3. Prepare print and digital manuscripts by hand-marking texts or using editing software.
4. Apply knowledge of writing as a process to developmental editing choices and copyediting responsibilities.
5. Select from and apply ethical standards pertinent to the gatekeeping and facilitative functions of copyeditors.

ENGL 436 Topics in the History of Rhetoric
The development of rhetoric from its classical origins through the present. May focus on key figures, periods, or concepts.
3 Cr. DEMAND

Student Learning Outcomes
1. Debate the nature of rhetoric.
2. Describe significant texts that have influenced the field of rhetoric.
3. Analyze arguments and practice critical thinking (see AAC&U rubric) 4. Connect the ideas and arguments of significant figures in the field to applications and issues in the present.
5. Write works of their own with awareness of genre and audience.

ENGL 437 Topics in Professional Writing
Focus on a specific field within professional writing such as grant writing, social media writing, or strategies for digital content. Content varies.
Prereq.: ENGL 191 or equivalent 3 Cr. DEMAND

Student Learning Outcomes
1. Develop a critical awareness of institutional and disciplinary frameworks 2. Describe research's relationship with institutional and social exigencies
3. Apply professional research methods to solve problems 4. Apply professional methods to create an effective written response appropriate for a particular purpose, audience, situation and authorial role.
5. Use rhetorical principles to understand and analyze cultural and social perspectives of language and technology to create effective texts 6. Apply theories, concepts and principles of rhetoric and writing to print, visual and digital texts, recognizing and creating genre forms 7. Develop an awareness of disciplinary frameworks, terminology, and critical issues relating to a specific professional field

ENGL 440 Advanced Creative Writing: Drama
The writing of plays at the advanced level.
Prereq.: ENGL 340 3 Cr. Spring

Student Learning Outcomes
1. Investigate and interpret representative texts within the genre.
2. Refine their knowledge of the vocabulary of craft, including effective use of time and space, character and dialogue, stage direction, and visual and physical metaphor.
3. Hear their work read aloud; listen, evaluate and respond to the work of their peers in group workshop.
4. Develop, revise, and rewrite their own original stage plays.
5. Assess their own progress and writing process as writers within the genre.

ENGL 441 Advanced Creative Writing: Nonfiction
The writing of nonfiction at the advanced level.
Prereq.: ENGL 341 Coreq.: 1-4 Cr. Fall

Student Learning Outcomes
1. Investigate representative texts and writers within the genre.
2. Refine, through reading and practice, their knowledge of the vocabulary of craft, including the effective use of significant/concrete detail, scene, dialogue, narrative, reflection, structure, figurative language, time, and prose rhythm.
3. Develop, revise, and rewrite their own work in the genre.
4. Evaluate, consider, and respond to the work of their peers in group workshop.
5. Interrogate, within their own work and the work of published authors, the complex issues of memory and truth in creative nonfiction.
6. Assess their own progress and writing process as writers within the genre.

ENGL 442 Advanced Creative Writing: Fiction
The writing of fiction at the advanced level.
Prereq.: ENGL 342 3 Cr. Fall | Spring

Student Learning Outcomes
1. Investigate representative texts and writers within the genre.
2. Refine, through reading and practice, their knowledge of the vocabulary of craft, including the effective use of significant/concrete detail, scene, dialogue, narrative, structure, figurative language, time, point of view and prose rhythm.
3. Experiment with and imagine new subjects and structures for their work.
4. Develop, revise, and rewrite their own work in the genre.
5. Evaluate, consider, and respond to the work of their peers in group workshop.
6. Assess their own progress and writing process as writers within the genre.

ENGL 443 Advanced Creative Writing: Poetry
The writing of poetry at the advanced level.
Prereq.: ENGL 343 3 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze representative texts and writers within the genre.
2. Students will create poems based on careful observation, using precise, specific sensory language.
3. Evaluate and respond to the work of their peers in group workshops.
4. Produce, revise and edit a portfolio of their own writing within the genre.

ENGL 445 Mississippi River Creative Writing Workshop
Writing and discussion of poetry, fiction, and other forms. Presentations by visiting professional authors. No prerequisites. Not a substitute for 340, 341, 342, or 343. May be repeated to 4 credits.
2 Cr. Summer

Student Learning Outcomes
1. Evaluate and respond to the work of their peers in group workshops.
2. Identify and apply sensory language [including similes and metaphors] to writing assignments.
3. Analyze and interpret presentations by professional authors.

ENGL 447 Practicum in Creative Writing
Advanced projects in creative writing, including literary magazine editing and other advanced editing or writing projects.
Prereq.: ENGL 440 or ENGL 441 or ENGL 442 or ENGL 443 or ENGL 444 4 Cr. Fall | Spring

Student Learning Outcomes
1. Interpret various selections in the literature genres [i.e., poetry, fiction, novels and/or screenwriting].
2. Evaluate and respond to the writing of their peers in group workshops.
3. Apply the techniques of writing to produce a portfolio of publishable quality work.

ENGL 448 Advanced Seminar in Creative Writing
Writing and editing creative works.
Prereq.: ENGL 440, ENGL 441, ENGL 442, ENGL 443 3 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze advanced creative writing.
2. Develop editorial and publishing skills.

ENGL 451 Advanced Language Arts Pedagogy
Theory and pedagogy in rhetoric, composition, literature, and language for grades 5-12. Preparation for student teaching. Professional development portfolios. May be taken in conjunction with field experience.
Prereq.: ENGL 351 3 Cr. Fall | Spring

Student Learning Outcomes
1. Differentiate curriculum to accommodate learners with varying abilities.
2. Demonstrate how to scaffold curriculum to maximize student understanding.
3. Integrate multiple activities and texts in a curriculum unit to provide learners with both breadth and depth on a topic.
4. Understand and apply theories associated with writing pedagogy.
5. Evaluate learners' progress using multiple forms of assessment.

ENGL 453 Topics in Teaching Composition
Strategies and theories for teachers of English/Language Arts. Themes and format vary. Sample topics: recent theory and practice, evaluation methods, portfolio development. May be repeated to 6 credits.
3 Cr. DEMAND

ENGL 454 Teaching Young Adult Literature
Theory, background and reading of young adult literature as applied to 5-8 grade teaching. Focus on

genres and reading strategies.
Prereq.: ED 200 or ED 300 3 Cr. Fall | Spring

Student Learning Outcomes
1. Distinguish among the various genres of Young Adult Literature (YAL).
2. Analyze and interpret fiction using common elements of literature.
3. Evaluate various texts for age appropriateness, quality, and diversity.
4. Examine professional resources related to YAL.
5. Construct teaching activities/plans to deepen students' understanding of literary texts.

ENGL 455 Communication Arts and Literature Practicum and Field Experience

Practicum and field experience for Communication Arts and Literature majors.
Prereq.: Admitted to Teacher Education; completed ED 300. Coreq.: Concurrent enrollment in ED 421 and ED 431. 3 Cr. Fall | Spring

Student Learning Outcomes
1. Students will learn, observe, and analyze the culture of the school and classroom in which they are participating.
2. Students will demonstrate knowledge, skills and dispositions needed to create safe, respectful, democratic cultures and learning communities in the classroom through participation in 5-12 classrooms.
3. Students will apply communication and relationship building strategies with students, peers, school employees, and parents/community members to an actual field experience.
4. Students will implement beginning levels of inclusive and equitable curriculum, assessment, and instruction based on diverse learner needs.
5. Students will apply language development, literacy knowledge, and skills in their content area through participation in a 5-12 classroom.
6. Students will apply appropriate academic language to the microteaching experience.
7. Students will reflect on their teaching experiences
8. Students will apply interdisciplinary curriculum development and team teaching where possible in the field experience.

ENGL 459 Seminar in Teaching Literature

Methods, theory, and practice for teaching grades 5-12. Variable topics and format. Sample topics: multicultural literature, the canon, young adult literature, genre, theme, literacy. May be repeated to 6 credits.
3 Cr. DEMAND

ENGL 460 Teaching English Language Learners in K-12

Theory and methods for English Language Learners and bilingual education for non-ESL and non-bilingual teachers. Issues for English Language Learners and instructional strategies.
Prereq.: ED 300 2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Appraise and discuss the particular linguistic, cultural, and learning needs and contributions of English language learners in their content areas for the purposes of designing instruction.
2. Analyze examples of spoken and written language for the purpose of assessing English learners' needs and planning instruction for English language learners in the content areas.
3. Evaluate theories of first and second language acquisition for the purpose of designing instruction to meet the needs of English language learners in the content areas.
4. Design instructional approaches and modifications based on learner needs and language learning theory in order to meet the needs of English language learners in the content areas.
5. Evaluate and discuss a variety of assessments and assessment formats and conditions for the purpose of preparing English learners for those assessments and for the purpose of developing accommodations and modifications as appropriate.

ENGL 461 Teaching ESL: Theory and Methods

Emphasis on the variety of methods used in teaching English as a second language with special attention to oral skills.
3 Cr. Fall

Student Learning Outcomes
1. Evaluate theories of how learners grow and develop in first and second language acquisition including similarities and differences between child, adolescent and adult language acquisition and identify how patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas.
2. Identify, select, design, and prepare a variety of methods, techniques, and program models suitable for second language instruction with diverse learners including content based methodologies to meet the needs of the students with limited English

proficiency and to differentiate instruction where appropriate in an environment that supports individual and collaborative learning, and that encourages positive social interaction, active engagement in learning, and self-motivation.
3. Identify, select, design, prepare, assess and reflect on communicative language teaching and instruction in the second language contexts with a focus on developing communication skills in listening, speaking, reading, and writing across the curriculum.
4. Identify, select, design, and prepare instruction in the teaching of English as a second language that integrates an understanding of English as a second language with the teacher's understanding of pedagogy, students, learning, classroom management, and professional development and differentiates instruction so that encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.
5. Design and integrate instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.
6. Identify, select and plan for the use of educational technology in every aspect of instruction from planning to assessment.

ENGL 462 TESL Methods: Reading and Writing

Application of TESL theory and methods to the teaching of reading and composition, including psycholinguistic models, the process approach, and contrastive rhetoric.
3 Cr. Spring

Student Learning Outcomes

1. Adopt and adapt multiple forms of instructional approaches based on their understanding of the various factors that influence the patterns of learning and development as well as learning difference.
2. Design lesson plans that reflect the interaction between content learning and language learning and support every student in meeting rigorous learning goals.
3. Develop learning tasks that promote literacy and communication skills in both spoken and written language.
4. Design assessment tools that reflect the developmental aspects of second language acquisition and its implications for content learning.
5. Collaborate to identify and incorporate appropriate instructional approaches to create learning environments conducive to positive social interaction and active engagements.
6. Reflect on his/her practice to evaluate his/her instructional choices and adapt to meet the needs of each learner.

ENGL 463 ESL and Culture

Preparation of ESL teachers for the multicultural experience of the ESL classroom. Original research in schooling across cultures and on the teaching of culture in ESL.
3 Cr. DEMAND

Student Learning Outcomes

1. Identity how a first culture influences one's speech, behavior, and thinking.
2. Collaborate to compare, analyze and summarize similarities and differences between a first and a second culture for at least on item of comparison.
3. Identify and report on the historical, social, and political aspects of language and cultural patterns in the United States and how they influence second language instruction.
4. Identify and compare cultural differences in social and educational contexts to ensure and enable an inclusive learning environments where learner from a variety of cultural backgrounds can meet high standards.
5. Design and prepare strategies for cross-cultural instruction and learning so that students from all cultural backgrounds have equal access to the curriculum.
6. Collaborate to identity, select, plan and prepare a lesson on intercultural communicative competence in educational settings.

ENGL 464 English Syntax

Application of modern linguistics to the description of English grammar, including an introduction to the theories and methods of structural and generative-transformational grammars.
Prereq.: ENGL 361 3 Cr. Fall

Student Learning Outcomes

1. Identify, describe, analyze, explain, and classify words hierarchically into their morphemic, parts of speech, phrasal categories, and clausal structures.
2. Identify, describe, analyze, and explain syntactic operations of rhetorical importance for writing and editing.
3. Identify, describe, analyze, and classify words

according to their word formation processes.
4. Identify, describe, analyze, and explain the derivational patterns based on current theoretical perspectives.
5. Compare knowledge of English to other languages.

ENGL 465 History of the English Language

The development of English sounds, grammatical structures, and vocabulary from Old English to Modern English; the reading and analysis of selected texts.
Prereq.: ENGL 361 3 Cr. Spring

Student Learning Outcomes

1. Use linguistic terms and concepts appropriately in discussions and writing about the history of the English language.
2. Identify, compare, and analyze linguistic features of Old English, Middle English, Early Modern English, and Present Day English.
3. Evaluate ways that language change is influenced by historical and cultural events in English-speaking countries around the world.
4. Conclude ways that the history of English is relevant to their professional goals and specific area(s) of academic expertise.

ENGL 466 American English

Spoken American English, its historical development, contemporary social, ethnic, gendered, and regional varieties, and the implications of language variation for education.
Prereq.: ENGL 361 3 Cr. Fall

Student Learning Outcomes

1. Use linguistic terms and concepts appropriately in discussions and writing about dialectal variation in contemporary spoken American English.
2. Identify, compare, and analyze linguistic features of social, ethnic, regional and gender-based varieties of contemporary spoken American English
3. Evaluate ways that language variation is influenced by migration and settlement patterns, social and ethnic isolation and contact, contact with languages other than English, etc.
4. Assess notions of language +correctness+ from the perspective of the social, regional, and ethnic diversity of contemporary American society.

ENGL 467 Topics in TESL

Variable topics in teaching English as a second language and second language acquisition, stressing the integration of theory, method, and practice.
Prereq.: ENGL 461 3 Cr. DEMAND

Student Learning Outcomes

1. Identify individual theories and practices and connect them for a specific topic in TESL.
2. Apply these theories and practices to TESL teaching/learning contexts related to the specific topic.
3. Differentiate TESL practices to meet individual needs of ESL students related to the specific topic.
4. Design TESL curriculum for TESL teaching/learning contexts related to the specific topic.
5. Evaluate the efficacy of TESL curriculum related to a specific topic.

ENGL 468 An Introduction to Testing for Language Teachers

Assessment methods of language skills of non-native English speakers: receptive (listening and reading) and productive (speaking, writing, structure). Kinds of tests, test validity, test reliability, and test washback/backwash.
3 Cr. Fall

Student Learning Outcomes

1. Describe the characteristics, uses, advantages, and limitations of formal and informal second language assessment techniques.
2. Analyze the limitations of using traditional assessment procedures in the identification and placement of students with limited English proficiency in academic programs, including gifted and special education programs.
3. Assess second language proficiency including item and test construction methods appropriate for students with limited English proficiency.
4. Synthesize how to administer, interpret, and explain the results of standardized tests and alternative methods of assessment to students with limited English proficiency, the students' parents, and to colleagues.

ENGL 469 Topics in Linguistics

One or more topics of current importance in linguistics.
Prereq.: ENGL 361 3 Cr. DEMAND

Student Learning Outcomes

1. Identify, describe, and analyze language with a focus on a specific topic.
2. Identify, describe, and explain key factors that contribute to the specific topic.

3. Identify, describe, and explain the steps necessary to apply the implications of the specific topic.
4. Identify, describe, and explain the factors that foster or hinder the application of the specific topic.
5. Assess the feasibility and the cost-benefit analysis of the course of action necessary to affect change as it relates to the topic of the course.

ENGL 473 Introduction to Phonology

Application of phonological theories to the description of sounds, sound structure, phonological processes with application to speaking and reading.
Prereq.: ENGL 361 3 Cr. Fall | Spring

Student Learning Outcomes

1. Transcribe words phonetically by using the International Phonetic Alphabet.
2. Identify, describe, analyze, and explain the articulatory parameters associated with the production of consonants and vowels.
3. Identify, describe, analyze, and measure acoustic phenomena of segmentals and suprasegmentals in speech.
4. Identify, describe, and explain various phonological processes for the purposes of text-to-speech and speech recognition applications.
5. Compare knowledge of English to other languages.

ENGL 477 TESL Student Teaching

Supervised teaching for students with the TESL minor leading to Pre K-12 ESL licensure.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Apply educational principles relevant to the physical, social, emotional, moral, and cognitive development of children, preadolescents, and adolescents.
2. Apply the research base for the best practices of kindergarten and primary, intermediate and middle level, and high school education.
3. Develop curriculum goals and purposes based on the central concepts of English as a second language and know how to apply instructional strategies and materials for achieving student understanding.
4. Analyze the role and alignment of district, school, and department mission and goals in program planning.
5. Analyze the need for and how to connect students' schooling experiences with everyday life, the workplace, and further educational opportunities.
6. Integrate the involvement of representatives of business, industry, and community organizations as active partners in creating educational opportunities.
7. Analyze the role and purpose of cocurricular and extracurricular activities in the teaching and learning process.
8. Apply the standards of effective practice in teaching students through a variety of early and ongoing clinical experiences with kindergarten and primary, intermediate and middle level and high school students within a range of educational programming models.

ENGL 478 TESL Internship

Capstone course for Linguistics emphasis in English major. Supervised tutoring or teaching in linguistics or English as a second language. By permission only.
Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Design and implement an appropriate language course syllabus.
2. Analyze how theory is applied to practice in integrative language teaching.
3. Observe and analyze language classes.
4. Interact with language learners both in groups and individually.
5. Observe and evaluate students' progress in language learning.
6. Reflect on classroom practice.

ENGL 481 Topics in Literature

A literary theme, genre, or major author considered in the relevant historical, cultural, and critical contexts. May be repeated with a different topic.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Work closely with one significant genre of literature and/or a major author who is not represented in our normal offerings. Dante and Dostoevsky are recent examples.
2. Identify and evaluate connections between literary texts and historical events.
3. Use literary terms appropriately when discussing and writing about medieval literature.
4. Formulate arguments about literature using close reading and theoretical approaches such as historicism, feminist criticism, etc.

ENGL 482 Topics in Themes

Selected recurrent themes such as myth, science, and nature considered within the relevant historical, cultural, and critical contexts. Focus of the course may vary. May be repeated up to 6 credits.
3 Cr. DEMAND

ENGL 490 Portfolio-Seminar

Capstone experience for English BA majors that integrates knowledge, skills, and concepts from their major program. May take the form of a seminar, portfolio, research project, or an advanced paper.
Prereq.: ENGL 300 or ENGL 331 or ENGL 332 or ENGL 333 Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Appropriately use literary skills and terminology learned throughout their academic career in written assignments and class discussions.
2. Formulate research questions and present the findings of their research in written and spoken discourse.
3. Situate texts in historical, literary, aesthetic, theoretical, social/political, ethical, and other contexts.
4. Lead classroom activities and discussions.
5. Construct an extended analytical/scholarly paper and/or presentation that uses methods appropriate to the subject and analyzes of secondary/critical sources.
6. Evaluate and revise their own work to compile a senior portfolio.
7. Demonstrate knowledge of skills in reading, writing, editing, speaking, and critical thinking in order to prepare for entering the professions.

ENGL 491 Senior Thesis

Research project designed in consultation with a project adviser and involving the writing of an extended documented paper. Satisfies the Upper Division Writing Requirement in English and may be substituted for the ENGL 490 requirement for the B.A. in English. Arranged with consent of adviser.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Produce documented research papers of 20-30 pages demonstrating their ability to access and assess research sources related to the chosen topic and develop a project bibliography.
2. Articulate connections between theory and practices in discussing an author or work.
3. Analyze and respond to different rhetorical situations relative to writing and explaining the students' work.
4. Plan a research project and write a substantive proposal.
5. Develop and organize arguments and evidence into an extended and coherent written discourse of 20-30 pages.
6. Revise and edit an extended project into a professionally acceptable final draft.

ENGL 493 Women in Literature

Women's literature in multiple genres in at least two time periods and with a comparative view of at least two cultures, preferably also including a non-Western culture.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze how English literatures by women and about women evolve through various eras and cultures.
2. Analyze a smaller sampling of literature in translation by women and about women, again through various eras and cultures.
3. Analyze how gender shapes a literary characterization, in addition to attributes such as race, class, religion, nationality, ethnicity, sexual identity, physical ability and age.
4. Analyze literature from a feminist critical analysis of literature, both in oral and written communication.

ENGL 497 Workplace Writing Internship

Department approved and directed field experience in a professional environment requiring the research, writing, editing, technology, and analytical skills of an undergraduate English student. May be repeated to a maximum of 16 credits.
Prereq.: 16 credits in ENGL above ENGL 201 and ENGL 332 Coreq.: 4-16 Cr. Fall | Spring | Summer

English for Academic Purposes (EAP)

EAP 101 Listening and Speaking

For students who use English as a second or foreign language. Focus on social and academic purposes in four areas: one-on-one communication, discussion, classroom presentations, and lecture note taking. Intermediate level. May be repeated.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Practice classroom discussion techniques.
2. Increase their proficiency in English grammar,

academic vocabulary, and pronunciation.
3. Perform individual presentations for the academic setting.
4. Improve listening comprehension and lecture note-taking.

EAP 102 Reading and Writing I

Development of skills in academic reading and writing. Focus on strategies in reading comprehension, paragraph development, and grammar of written English. May be repeated.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Form complex and cohesive paragraphs.
2. Organize academic essays.
3. Apply critical thinking and reading skills.
4. Use accurate grammar in written English.
5. Use academic vocabulary when writing academic essays.
6. Evaluate rhetorical situations for writing purposes.
7. Use and appropriately document external sources when writing.

EAP 150 Cultural Orientation for International Students

Social and academic life on a United States (US) campus. Focus on cultural adjustment cycle and strategies that help students integrate themselves in US campus life. Required for international undergraduate students from schools outside the US or Canada. International students who have studied in the US for at least one academic year full-time are exempt. Graduate students are exempt.
2 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze the cultural adjustment cycle to develop strategies to adjust themselves to US campus life.
2. Discuss cultural issues and develop strategies to communicate with persons from other cultures.

EAP 151 Administrative Orientation for International Students

Administrative procedures and socio-academic realities of SCSU and St. Cloud: immigration law, health services, library services, registration and advising, security, sexual violence and harassment issues, racism and xenophobia. Required of all entering international students.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Navigate key administrative procedures and evaluate the issues that have a significant impact on them as international students.
2. Evaluate the social and cultural issues that may affect them.
3. List campus resources that will empower them to seek help as needed.

EAP 201 Listening and Speaking for Academic Purposes

Focus on speaking and listening comprehension for academic purposes in four areas: office hour interactions, discussions, classroom presentations, and lecture note taking. Advanced level. May be repeated.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Conduct appropriate communication for professor/student interaction.
2. Practice classroom discussion techniques.
3. Perform individual presentations for the academic setting.
4. Improve listening comprehension and lecture note-taking.

EAP 202 Reading and Writing II

Development of skills in reading and writing for advanced students. Focus on strategies to improve reading speed and comprehension of academic texts and the development of an essay. May be repeated.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Organize academic essays.
2. Apply critical thinking and reading skills.
3. Use accurate grammar in written English.
4. Use academic vocabulary when writing academic essays.
5. Evaluate rhetorical situations for writing purposes.
6. Use and appropriately document external sources when writing.

Environmental and Technolgical Studies (ETS)

ETS 100 Competency Exams

Demonstrated competencies in various curricula of vocational-technical education. Total of five examinations possible. Exams 1-4, 5 credits. Exam 5,

0-20 credits.
Coreq.: 1-20 Cr. DEMAND

ETS 115 Engineering Communication

Graphic solutions to engineering problems. CAD and technical writing. Free-hand sketching, lettering, scaling. Drafting considerations that pertain to the areas of engineering, surveying, and architecture.
3 Cr. Fall

Student Learning Outcomes

1. Interpret design practices within product development settings.
2. Incorporate theoretical and practical knowledge toward creative design solutions.
3. Read, edit, and review product design documents and electronic files for manufacturing.
4. Perform sketching and Ideation representation.

ETS 130 General Woodworking

History, development, and current role of our forest resource. Tools, machines, and processes involved in working with wood.
3 Cr. Spring

Student Learning Outcomes

1. Distinguish between hardwood and softwood identifications, applications, and finishes.
2. Use tools (both manual and power) correctly and safely.
3. Apply appropriate woodworking design, manufacture, and finish to complete projects.
4. Compute cost of labor and material in the woodworking industry.
5. Use appropriate measuring techniques.
6. Accurately apply group and individual problem solving strategies.
7. Compare and contrast customer service issues.

ETS 134 Introduction to Construction Technology

Light and heavy structures, custom and factory construction. Residential construction procedures. Alternative and sustainable building practices to conserve energy and materials.
3 Cr. Spring

Student Learning Outcomes

1. Apply the principles of building placement on land for solar, wind, and precipitation issues.
2. Evaluate foundation systems in order to select the most appropriate system.
3. Evaluate residential building systems from start to finish.
4. Evaluate moisture and thermal protection for housing.
5. Evaluate and select appropriate finish work in residential and commercial structures.
6. Accurately apply group and individual problem solving strategies.
7. Compare and contrast mechanical and electrical systems.

ETS 153 Integrating Technology into STEM Curriculum

Techniques for STEM teachers. National standards in mathematics, science, and technology. Solving everyday problems.
3 Cr. Fall

Student Learning Outcomes

1. Perform an analysis of the Standards for Technological Literacy.
2. Apply basic organizational concepts to develop an electronic portfolio.
3. Master the delivery of classroom presentations in STEM areas.
4. Design and construct an end effector to accomplish a task.
5. Build a series of mechanical gear configurations and evaluate them using given criteria.
6. Employ the principles learned to solve a challenge problem.
7. Assess scientific concepts and relate them to how they are used in design and other technological processes.
8. Apply basic electricity and electronics concepts and design simple circuits to sense real-world conditions.
9. Demonstrate mastery of the use of an icon-driven software program.

ETS 154 Vocational Teaching Internship

4 Cr. DEMAND

ETS 156 Introduction to Environmental and Technological Studies

Career opportunities, program requirements and expectations for students in Environmental and Technological Studies.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the career opportunities and breadth of environmental and technological innovations.
2. Compare and contrast the fields of study in

environmental and technological areas.
3. Identify and follow the advising procedures and strategies of the ETS department.
4. Evaluate the various portfolio outlines to create an environmental and technological portfolio.

ETS 157 Computers in Industry

Survey of computer applications, present and future impact on industry and society; introduction to computer hardware and software with emphasis on characteristics and limitations of modern computer systems.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Describe computer applications for industry.
2. Identify and evaluate the impact of computers on work, culture, and society.
3. Explain issues in computing and cutting-edge computer technology.
4. Apply software applications to solve problems.

ETS 182 Technological Change and Sustainable Society

Positive and negative effects of technology on social institutions and the environment. Sustainable solutions and practices.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

ETS 183 Technology and Third World Development (Diversity)

Developing technology in the third world, including its application, adaptation, and impacts on social and economic structures.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

ETS 185 Energy Resources and Issues

Energy production, consumption/utilization, technologies, politics, and environmental impacts.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES | GOAL AREA 10: ENVIRONMENTAL ISSUES

ETS 186 Introduction to Aerospace Technology

Aerospace technology and the supporting systems from its history to the future.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Explain an operational definition of Aerospace Technologies.
2. Create low cost high engagement aerospace based Technology Education activities for high school classes.
3. Define the connectivity between disciplines, particularly math, physical science language, science, history, and social studies related to Flight and Space exploration.
4. Create and test physical concepts and theories of flight and space related orbital mechanics at an introductory level.
5. Measure performance and reliability of combustion based propulsion systems to determine the most effective one.
6. Build models and launch platforms for testing and problem solving.

ETS 240 Metrology

Precision measurement, critical dimension evaluation, geometric dimensioning and tolerancing, error analysis, calibration and documentation, repeatability and reproducibility, coordinate measuring machines, non-contact measuring systems.
Prereq.: MATH 113 and PHYS 231 2 Cr. Spring

Student Learning Outcomes

1. The student will be able to describe the purpose of critical dimensions in manufacturing.
2. The student will be able to effectively use and interpret the operation of precision measurement tools and equipment.
3. The student will be able to analyze the effectiveness of a measurement system.
4. The student will be able to analyze simple parts for dimensional accuracy and functionality.
5. The student will be able to develop an appropriate measurement system for manufacturing applications.

ETS 241 Applied Statics and Dynamics

Static and dynamic systems. Force and moment vectors, resultants. Statics and free-body diagrams. Applications to simple trusses, frames, and machines. Properties of areas. Internal forces. Laws of friction. Particle dynamics. Mechanical systems and rigid-body dynamics. Kinematics and dynamics of plane systems. Energy and momentum of 2-D bodies and systems.
Prereq.: PHYS 231 Coreq.: MATH 211 3 Cr. Fall

Student Learning Outcomes
1. The student will be able to construct and interpret a free-body diagram.
2. The student will be able to analyze force equilibrium problems including some distributed loads.
3. The student will be able to utilize a knowledge of internal forces and moments in members.
4. The student will be able to analyze the kinematic energy and momentum for particles and systems of particles.
5. The student will be able to analyze the kinematic energy and momentum for rigid bodies.

ETS 242 Applied Thermodynamics and Fluid Mechanics

Thermal systems and fluid flow. First and second laws of thermodynamics, closed systems, refrigeration systems, gas turbines, hydrostatic forces, laminar and turbulent flow.
Prereq.: MATH 211 and ETS 241 3 Cr. Spring

Student Learning Outcomes
1. The student will be able to analyze simple thermal systems.
2. The student will be able to describe the basic operation of refrigeration and gas turbine systems.
3. The student will be able to analyze static fluid situations.
4. The student will be able to interpret effects of various fluid flow situations.

ETS 243 Strength of Materials

Properties of engineering materials, including strength and stiffness. Stress, strain, shear, torsion, bending, and columns.
Prereq.: MATH 211, CHEM 210, and ETS 241 3 Cr. Spring

Student Learning Outcomes
1. The student will be able to predict the relationship between material properties and reaction to stresses.
2. The student will be able to analyze basic stress and strain.
3. The student will be able to select appropriate materials for manufacturing applications.

ETS 253 Technology Education Curriculum

Technology education, history, and philosophy, selection of content, curriculum development, developing classroom activities, and professionalism in technology education.
3 Cr. Fall

Student Learning Outcomes
1. Identify and trace historical developments of technology education.
2. Interpret and describe various philosophies of education and their assumptions.
3. Describe the various tracks and related career opportunities in technology education.
4. Create course descriptions and learner outcomes for a variety of areas in technology eeducation.
5. Apply an educational taxonomy to evaluate learning outcomes.
6. Prepare specific instructional objectives and tasks for technology education.
7. Develop lesson plans, activities, and models of learning in technology education.

ETS 260 Introduction to Environmental Studies

Past, present and future human environments. Environmental concerns.
3 Cr. Fall | Spring GOAL AREA 10: ENVIRONMENTAL ISSUES

ETS 262 Environmental Instrumentation

Study of common laboratory instruments to monitor air, water and soil quality.
Prereq.: CHEM 160 or CHEM 210, ETS 260 3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate how to properly collect and store environmental samples.
2. Calculate accuracy and precision of environmental sample measurements.
3. Use quality assurance/quality control procedures.
4. Identify and explain the costs and benefits of different technologies used to make environmental measurements.
5. Use standards to test the validity of field and laboratory methods.
6. Understand and follow all safety procedures.

ETS 270 Electronics Technology

Electrical and electronic practices. Basic theories, production and generation, conductors, semiconductors, insulators, resistance, capacitance, inductance, direct and alternating current circuit theory.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Understand the fundamentals and nature of electricity.
2. Understand how to make electrons move and the process of batteries.
3. Understand the use of generators/alternators, solar arrays, MHD generators, Piezoelectric effect, and thermo-couples.
4. "Receive simulator experience with power transmission and control for the ""U.S. Power GRID"" Generation of power." 5. Operate, and select for application, digital control devices.
6. Assemble, test and troubleshoot a final electronics project.

ETS 310 Management for Technologists, Scientists, and Engineers

Management theories, concepts, principles, functions, and processes related to applied science, engineering, and technological systems.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Explain the social responsiblity of business.
2. Define the basic functions of management.
3. Explain the need for technologists, engineers, and scientists in management.
4. Explain managerial roles/functions.
5. Explain the meaning of mission, vision, goals, objectives, and strategy.
6. Discuss the strategies for managing technology.
7. Relate content and process theories of motivation to the workplace.
8. Analyze the different forms of organizations.
9. Differentiate between line and staff and their relationship.
10. Appreciate the use and value of teams/groups.

ETS 312 Computer-Aided Design

Three-dimensional graphic design representations, engineering drawings, cutter path data for numerically controlled machine tools.
Prereq.: ETS 115, ETS 117, ETS 311 3 Cr. Spring

Student Learning Outcomes

1. Apply proper pencil sketching including dimensioning for pre- CAD preparation.
2. Utilize current practices in Computer Aided Design for problem solving.
3. Plan, demonstrate, and manage the design process.
4. Apply geometric construction for solid modeling of objects.
5. Provide working drawings for all project components.
6. Implement production dimensioning practices for manufacturability.
7. Correctly use Geometric Dimensioning and Tolerancing (GDT) to specify sizes.
8. Produce a 3D model using a rapid prototyping machine/printer.
9. Demonstrate proper organization of the drawing/data package for professional level presentations.

ETS 314 Design for Manufacturability

Evaluate designs for produciblity. Strategies, such as standardization and simplification, to effectively change designs to improve manufacturability with respect to cost, time to market, lean, and flexibility. Concurrent engineering.
Prereq.: ETS 312 and ETS 345 3 Cr. Spring

Student Learning Outcomes

1. Select design related faults within existing products.
2. Research and cite existing solutions to the design faults assembly.
3. Produce a 3d model using a rapid prototyping machine/printer.
4. Create and assemble appropriate advertisement brochures or documents for product promotion.
5. Produce alternative design solutions that are tractable.
6. Modify and refine preliminary designs toward manufacturability.
7. Adjust design elements for ergonomic factors and safety.
8. Implement aesthetic aspects for market acceptance.
9. Will be capable of developing CAD based working detail drawings of components and assemblies.
10. Provide effective diagrams and manuals for product maintenance, repair.

ETS 322 Communication Technology

Methods of communication including: foundations, current practices, and trends. Acoustic, electramagnetic, optical systems for origination, transmission, reception, and storage of information.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Compare and contrast electronic, acoustic, photonic, and magnetic mediums of communication.
2. Produce a comprehensive communication

analysis of a chosen workplace.
3. Select appropriate communications technologies to enhance workplace efficiency.
4. Describe the communications related concepts of wavelength and frequency.
5. Compare and contrast signal coding methods (AM, FM, PCM).
6. Select appropriate data storage systems for secure archiving.
7. Demonstrate principles and operation of sound recording mechanisms.

ETS 325 Commercial Graphics

Computer-based systems for design of, and proofing for commercial production of, illustrations, logos, diagrams, and instruction manuals. Digital color separation, prepress activities, platemaking, and offset printing techniques.
3 Cr. Fall

Student Learning Outcomes

1. Utilize bitmap editing technology for graphic presentations.
2. Design attractive advertisement for product and or services.
3. Design easily used and clear maintenance and repair manuals.
4. Select reproduction techniques for proofing.
5. Apply color theory to analysis of graphic products.
6. Apply half tone methods to color graphic output.
7. Demonstrate color separation processes using diagrams or illustrations.
8. Research client needs for establishing parameters and limits of projects.
9. Apply ink and laser based colors to various paper and non-paper surfaces.
10. Utilize laser based technologies for product marking and engraving.

ETS 330 Construction Design and Processes

Designing and manufacture of construction products; maintaining and using construction equipment.
Prereq.: ETS 130 3 Cr. Fall | Spring

Student Learning Outcomes

1. Develop an understanding of material selection and process of cabinet components.
2. Design project including bill of materials, drawings, and processes for fabrication.
3. Fabricate designed project including appropriate finishing techniques.

ETS 335 Electrical and Mechanical Systems in Residential Construction

Electrical plumbing, and climate control systems in residential construction.
3 Cr. Fall

Student Learning Outcomes

1. Develop knowledge of electrical mechanical systems.
2. Design electrical/mechanical system for residential building.
3. Evaluate specifications for meeting current building codes and standards.

ETS 336 Residential Construction

Major components of residential construction.
3 Cr. Spring

Student Learning Outcomes

1. Develop a working knowledge of building codes and specifications.
2. Apply construction techniques to a variety of residential building processes.
3. Develop a tracking system with an electronic program for project management of a residential construction project.

ETS 340 Continuous Improvement

Continuous improvement strategies. Six sigma basics, statistical quality control tools, benchmarking, lean principles, inspection strategies, total quality management, quality function deployment.
Prereq.: STAT 239, ETS 240, and ETS 345 3 Cr. Fall

Student Learning Outcomes

1. The student will be able to identify, recommend, and implement a comprehensive continuous improvement strategy.
2. The student will be able to select appropriate tools for improvement, interpret results, and suggest effective changes.
3. The student will be able to accurately integrate customer demands into the improvement process.
4. The student will be able to evaluate the effectiveness of the improvement strategies.

ETS 343 Computer Integrated Manufacturing

Computer aided numeric control, process planning and control, and group process technology.
Prereq.: ETS 274 3 Cr. Spring

Student Learning Outcomes

1. Implement safe operating parameters/conditions in laboratory and industrial environments according to regulatory institutions.
2. Operate CNC based machine tools: Lathes, Mills, Plasma Torches, Routers, Lasers, 3D printers in accordance with best practices.
3. Develop machine tool operating programs that run successfully producing products.
4. Debug programming errors to satisfy fault indicators.
5. Compare and contrast primary programming languages for CNC.
6. Prepare machine tooling for CNC production from specification list.
7. Setup jigs and fixtures for tool operations for rigid material positioning.
8. Utilize resource materials for best practices fixturing, indexing, speeds and feeds.
9. Manufacture multiple CNC products.

ETS 345 Manufacturing Processes

Production processes in metals-based industries including foundry, welding, and machining practices. 3 Cr. Fall

Student Learning Outcomes

1. Demonstrate appropriate personal and facility safety in every task.
2. Production of Destruction test passing sample welds.
3. Compare and contrast surface treatments, polishing, etching, and buffing.
4. Develop strategies and tactics for manufacturing efficiency.
5. Produce specification based product welds: Oxy-acetylene, Arc, TIG, Spot, Braze.
6. Setup, and operate machine tools: grinders, mills, lathes, benders, punches as described in blue/data prints.
7. Utilize hand tools, within their design capacity, for fabrication of components and assemblies.
8. Research material properties to match outcome performance specifications.
9. Select materials based on their properties, cost, and availability.
10. Demonstrate foundry techniques that produce specified castings.

ETS 348 Plastics Manufacturing

Structure and properties of polymers and processes used in the manufacture of plastic products. Mechanical and chemical behaviors, injection molding, extrusion, thermoforming, casting, finishing methods, and other common industrial processes. Environmental issues.
Prereq.: MATH 113, CHEM 210, and ETS 343 3 Cr. Fall

Student Learning Outcomes

1. Compare and contrast 7 different polymer manufacturing methods.
2. Compare and contrast different polymer compounds.
3. Research mold design criterion for application to learner designed product.
4. Demonstrate CAD and CNC technologies used for mold design of learner designed product.
5. Apply accepted design elements in the steps of mold production.
6. Operate synthetics machines: Extrusion, Blow molding, Injection molding, Rotational molding, compression molding, sheet bending, welding to produce quality parts.
7. Manufacture products from learner machined mold cavity.

ETS 353 Instructional Strategies

Instructional strategies in technology education, learning theories, approaches and delivery systems, evaluation and assessment, and planning laboratory facilities.
Prereq.: ETS 253 3 Cr. Spring

Student Learning Outcomes

1. Identify and trace the historical developments of Technology Education.
2. Interpret the role of Technology Education in American society and in education.
3. Identify and interpret curriculum models presently being implemented in Technology Education.
4. Identify the structure and use of Bloom's Taxonomy related to Technology Education and how to implement it into the classroom

ETS 360 Environmental Literature

Analysis, synthesis, and evaluation of perspectives on environmental issues.
Prereq.: ETS 260 3 Cr. Spring

Student Learning Outcomes

1. Explain the historical roots of environmental studies through classic literature.
2. Analyze and evaluate environmental writings through in-depth discussions/dialogues in class.
3. List important historical and current sources of

environmental literature.
4. Synthesize and describe a range of perspectives on a given environmental issue.
5. Evaluate alternative views of environmental issues from various sources.
6. Analyze how American nature writers shaped the environmental movement.

ETS 362 Water and Soil Quality Instrumentation

Analysis and interpretation of water and soil quality measurements using common laboratory instruments.
Prereq.: AHS 230, CHEM 210 1 Cr. Even Fall

ETS 363 Resource Management

Energy and material resource management including waste generation, energy efficiency/conservation, and resource recovery.
3 Cr. Fall GOAL AREA 10: ENVIRONMENTAL ISSUES

ETS 367 Environmental Regulation

Environmental regulations that control human impacts to air, water, and land resources. Processes of administering environmental laws in the U.S., including national, state, and local legislation, administrative agencies, and regulatory actions.
Prereq.: ETS 260 3 Cr. Fall

Student Learning Outcomes

1. Analyze major national and state legislation and regulation mandating environmental protection.
2. Examine government agencies responsible for administration of environmental legislation and regulation.
3. Evaluate means of statutory and regulatory compliance.

ETS 368 Introduction to Soil Science

Soil formation and classification. Relationship between physical, chemical and biological characteristics and processes of soil with the environment.
Prereq.: CHEM 140, CHEM 160, ETS 262 3 Cr. Fall

Student Learning Outcomes

1. Identify soils using pedogenesis, soil morphology and soil classification systems.
2. Integrate soil classification and mapping skills with soil conservation and soil management practices.
3. Analyze biological, physical and chemical characteristics of soil.
4. Examine relationships between soil, water, and nutrients in fertility management, agricultural production and waste management.

ETS 373 Environmental and Technology Assessment

Assessment of technological development and environmental quality in society.
3 Cr. Spring

Student Learning Outcomes

1. Differentiate among types of impact assessment (environmental, technological, and social).
2. Apply current Minnesota policies and integrate them into an Environmental Assessment Worksheet report.
3. Demonstrate understanding of the elements of a technological assessment and forecast and apply them to oral and written technological assessment reports.

ETS 374 Production Technology

Study and application of principles of production as they relate to construction and manufacturing. Management aspects including OSHA regulations and UBC codes.
3 Cr. Fall

Student Learning Outcomes

1. Compare and contrast common technological manufacturing methods and manufacturing system designs.
2. Apply principles and concepts of manufacturing to problem solving experiences.
3. Implement appropriate and regulation compliant safety practices in laboratory facilities.
4. Research manufacturing literature to develop Gant Chart based process control. Compare and select quality assurance steps in manufacturing. Apply principles of attractive packaging and presentation for marketing. Demonstrate effective and successful disposition in teamwork and leadership skills toward manufacturing a product.
5. Compare and select quality assurance steps in manufacturing.
6. Demonstrate effective and successful disposition in teamwork and leadership skills toward manufacturing a product.

ETS 375 Society and the Environment

Interactions between humans, technology, and ecological systems. Human perceptions of the environment; environmental impacts of technology; and political, technological, and social responses to

environmental issues.
3 Cr. GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 10: ENVIRONMENTAL ISSUES

ETS 388 Transportation/Energy Technology

Exploration of transportation/energy as the prime mover of people and products within a society; transportation/energy processes including energy storage and power/energy conversion.
3 Cr. Fall

Student Learning Outcomes

1. Evaluate traditional and alternative transportation systems.
2. Research traditional and alternative energy systems.
3. Develop an understanding of renewable energy and calculate impacts of various systems.
4. Forecast future transportation systems and societal changes as a result of new systems.

ETS 405 Foundational Technical Developments

The universal characteristics of technology, its foundational technical developments, and their effects upon culture. Tools, materials, processes, systems.
3 Cr.

Student Learning Outcomes

1. Research technical developments in various historical areas.
2. Present key technical developments including justification for selection of technical development.
3. Conduct in-depth research on one foundational technology.

ETS 413 Workshop: CAD Practices

Computer-aided Design. Solid modeling design software. 3D graphics model development and virtual prototyping.
3 Cr. Summer

Student Learning Outcomes

1. Implement sketching techniques including preliminary dimensioning.
2. Provide leadership activities within design group(s).
3. Create CAD based working drawings for all components and Implement production design practices for manufacturability.
4. Correctly practice Geometric Dimensioning and Tolerancing (GDT) on learner based projects.
5. Demonstrate proper organization of the drawing/data package for the product.

ETS 414 Practicum (Topical)

Practical experiences and research in a technological system in communication, construction, manufacturing or transportation/energy. May be repeated to maximum of 6 credits.
Coreq.: 1-3 Cr.

ETS 418 Architectural Design and Working Drawings

Design of residential home. Working drawings, specifications, building codes, and landscaping. Blueprint reading symbols and concepts. Computer-aided home design.
3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate mastery of blueprint reading skills with symbols, lines and dimensions.
2. Apply a complete understanding of how working drawings are developed.
3. Supply proper techniques of blueprint reading skills to problem solve construction issues.
4. Demonstrate mastery of specification reading and writing skills.
5. Employ all blueprint reading skills to design a residential home utilizing computer software.
6. Apply accurately all software menus and tool buttons.
7. Demonstrate mastery of software editing objects function, file management, defaults, and preferences.
8. Develop a floorplan, foundation, elevation, and landscaping print.

ETS 430 Mass Production

Care and application of production machines. Production principles.
3 Cr. Spring

Student Learning Outcomes

1. Select design possibilities for learner/group production products by researching and evaluating similar product designs.
2. Utilize appropriate safety equipment and machine practices.
3. Apply Jigs and fixture systems to assembly line processes and select quality assurance steps in learner manufacturing.
4. Develop Gant Chart based production flow diagrams. Demonstrate effective and successful

disposition in teamwork and leadership skills toward Mass production of multiple products.
5. Demonstrate effective and successful disposition in teamwork and leadership skills during the mass production of multiple products.

ETS 435 Concrete and Masonry Academy Workshop

Masonry and concrete construction. Classroom, tours, and hands-on activities.
3 Cr. Summer

Student Learning Outcomes

1. Compare and contrast masonry methods: brick, ceramic, concrete block, slump block, adobe, tile and select methods of masonry reinforcement for bending, point loading, shear loads and uniform loads.
2. Manage personnel on masonry construction projects for safety and efficiency of task fulfillment.
3. Structure the logistics of material and labor for masonry projects.
4. Compare and contrast concrete construction methods: poured in place, formed, precast, sprayed on, Geopier.
5. Compare and contrast the finishing and coloring of concrete using colorants, finishes, and covering systems.
6. Select methods of concrete reinforcement for shear point loading, uniform loading, and chemical corrosion.
7. Evaluate concrete projects for compliance with current best practices and cost minimization.

ETS 436 Construction Scheduling and Estimating

Preliminary, detail, and quantity estimating and scheduling techniques for residential and small commercial projects.
3 Cr. Fall

Student Learning Outcomes

1. Develop a project schedule for residential or commercial construction project.
2. Calculate total material costs with material take off estimation technique.
3. Evaluate various software management systems for scheduling and estimating.
4. Understand various project management techniques and evaluate advantages and disadvantages of different techniques.

ETS 440 Production Systems Control

Planning and control of manufacturing systems. Material requirements planning, production scheduling, forecasting demand, facility layout, inventory control, production systems with regard to planning.
Prereq.: MATH 112, ETS 343, and ETS 345 3 Cr.
Spring

Student Learning Outcomes

1. The student will be able to identify common contemporary production systems.
2. The student will be able to evaluate the economic and environmental feasibility of rudimentary production plans.
3. The student will be able to design a simple, effective production system that includes consideration of materials requirement planning (MRP), inventory control, quality control, material handling, facility layout, and production scheduling.

ETS 444 Internship

Offered only to students who hold internships with industrial organizations for which advanced approval has been given by the department. May be repeated; however, a maximum of 9 credits. will count toward an undergraduate degree and 4 credits toward a graduate degree.
Coreq.: 1-16 Cr. DEMAND

ETS 446 Manufacturing Concepts

Management of production systems. Safety, work design and ergonomics, personnel practices, ISO, quality management practices, supply chain basics, sustainability, communication, project management.
3 Cr. Fall

Student Learning Outcomes

1. Be able to plan and structure effective manufacturing facilities including but not limited to materials flow, machine placement, human factors, quality assurance, maintenance, and receiving and shipping.
2. Interface between management and production level personnel for effective communication/leadership.
3. Utilize best practices for task assignments, building worker confidence, and efficacy.
4. Analyze: process, tooling, workers, managers, and facilities to develop modifications with the intention to enhance productivity and safety.

ETS 448 Applications of Composite Materials

Properties and applications of composites. Design issues. Open molding, resin infusion, and high-volume molding methods. Materials, tools, and processes.
Prereq.: ETS 343 and ETS 348 3 Cr. Fall

Student Learning Outcomes
1. Compare and contrast the structural and matrix materials used in composite products.
2. Apply safety practices and personal protection devices to the laboratory environment.
3. Design and manufacture forms and molds for composite structures employing production techniques for fiber reinforced plastics.
4. Manage composite manufacturing facilities for efficiency and productivity.
5. Produce finished composite components and the associated structures.

ETS 450 Construction Documentation
Construction contracts, documents, and legal analysis. Pre-construction, contract administration, project record-keeping, and close-out.
3 Cr. Spring

Student Learning Outcomes
1. Perform an analysis of documents used during pre-construction, contruction, and closeout.
2. Demonstrate mastery of the roles and responsibilities of all construction stakeholders.
3. Apply basic contractual concepts to the solution of construction problems.
4. Apply procurement procedures and documentation to all phases of construction.
5. Demonstrate master of all submittal documentation and project close-out.
6. Employ documentation procedures during site visits, observations, and inspections.
7. Assess construction project quality assurance, and quality control measures, and documentation.
8. Demonstrate mastery of blueprint and specification documents.
9. Employ claims and dispute documents accurately and ethically.
10. Assess hourly and salary duties and payment schedules.

ETS 451 Workshop: Technology Education Activities
Developing activities for the secondary education technology educator.
Coreq.: 1-3 Cr. Fall

Student Learning Outcomes
1. Research and understand technology education standards.
2. Design and development of activities for grades 5-12.
3. Research various instructional strategies for delivering technology education content.
4. Integrate technology education activities with other disciplines.

ETS 454 Supervised Teaching
Supervised teaching experience for those presently employed in a vocational school. A regular student teaching experience in a vocational school for others. By permission.
Coreq.: 12 Cr. DEMAND

ETS 456 Senior Project (Capstone)
Review overall curriculum, technical aspects, relationships between courses, assessment of student learning, development of a senior project, and development of portfolio. Successful completion of this course with a C or better meets the Upper Division Writing Requirement for the Department.
Prereq.: ETS 156 3 Cr. Fall | Spring

Student Learning Outcomes
1. Develop a resume and engage in mock interviews.
2. Propose and complete a capstone project in a group.
3. Develop knowledge of and engage in job searching skills.
4. Complete formal and informal assessment of program including professional exam where available.

ETS 457 Senior Project (Capstone) II
Completion of design project with emphasis on project management, teamwork, and technical design factors. Written report and oral presentation of completed project.
Prereq.: ETS 456 2 Cr. Spring

Student Learning Outcomes
1. The student will be able to synthesize program content to complete a technical project.
2. The student will be able to use project management tools to complete an extended project.
3. The student will be able to apply teamwork skills.
4. The student will be able to effectively communicate the results of an extended technical project both orally and in written form.

ETS 458 Workshop: Modular Technology I.

Modular Technology laboratory systems to develop higher level thinking skills (synthesis/evaluation) in relationship to various technologies in the areas of Communication, Construction, Manufacturing, Transportation and BioTechnology. Testing and assessment of modular units.
2 Cr. Summer

Student Learning Outcomes

1. Research and evaluate activities designed by modular technology companies.
2. Design activities using modular technology for their classroom.
3. Evaluate activities using modular technology to measure how they meet education standards.

ETS 459 Workshop: Modular Technology II

New educational technology systems available for middle and high school technology education classrooms including such modules as Robotics, Electronics, Graphic Design, Animation, Auto Exploration, Air Track, Satellite Communications, Weather Satellite, Virtual Reality, etc. Testing and Assessment of Modular Units.
2 Cr. Summer

Student Learning Outcomes

1. Build on activities designed in Modular Technology I to align with technology standards.
2. Integrate math, science and technology standards to be addressed in activities.
3. Align activities designed for modular technology equipment to their school curriculum.

ETS 460 Standards for Technology Education

Standards at the local, state, and national levels and how the standards are integrated and the impacts on technology education.
Coreq.: 1-3 Cr. Summer

Student Learning Outcomes

1. Research national education standards related to technology education teaching standards.
2. Develop a curriculum that aligns with standards.
3. Develop an assessment plan for developed curriculum.

ETS 461 Current Issues in Environmental Science

Capstone course for Environmental Science majors. Contemporary topics in Environmental Sciences.
Prereq.: BIOL 312, CHEM 320, EAS 230 3 Cr. Spring

Student Learning Outcomes

1. Critically examine the fate of major environmental contaminants based on their chemical properties and location within the ecosphere.
2. Discuss issues of interest such as the processes of bioremediation and how it can be enhanced by manipulation of environmental conditions.
3. Demonstrate writing and presentation skills necessary to communicate scientific information to professional audiences.

ETS 463 Environmental Toxicology

Fate and flow of environmental contaminants and stressors which affect populations including pesticides, heavy metals, organic pollutants, and physiochemical factors. The effects of toxicants at the individual, population, community, and ecosystem levels.
Prereq.: ETS 260, CHEM 140, CHEM 160 3 Cr. Spring

Student Learning Outcomes

1. Compare and contrast mammalian and environmental toxicology.
2. Define differences between acute and chronic environmental toxicity testing.
3. Evaluate the strengths and weaknesses of individual, population, community, and ecosystem toxicology tests.
4. Describe the effects of various pesticides in aquatic and terrestrial environments.
5. Compare and contrast hazard evaluation and risk assessment for environmental contaminants.

ETS 465 Wetland Environments

Wetland types, definitions, and formation. Wetlands identification and delineation. Human-wetland interactions.
Prereq.: ETS 260, ETS 262 3 Cr. Fall

Student Learning Outcomes

1. Describe the three criteria for determining a jurisdictional wetland.
2. Compare and contrast food webs in different parts of wetlands.
3. Compare and contrast the nitrogen and phosphorus cycles in wetlands.
4. Differentiate among natural, restored, and created wetlands.
5. Explain wetland assessment and describe the tools available for these processes.

ETS 467 Soils and Environmental Quality

Chemical, physical and biological principles of soils. Influences of soil on biogeochemical cycling of nitrogen, phosphorus, sulfur and trace elements. Management of polluted soils.
Prereq.: ETS 260, ETS 262 3 Cr. Spring

Student Learning Outcomes
1. Compare and contrast soil sampling techniques and soil analysis methods.
2. Analyze chemical, physical and biological soil processes in relation to soil environmental quality.
3. Analyze of interactions of pollutants with soil, water and air.
4. Examine nutrient cycling with the soil system.
5. Evaluate soil remediation processes and techniques.

ETS 468 Waste Management Systems
Characteristics and design of waste management systems. Environmental, financial, and societal implications of waste management.
Prereq.: ETS 260 3 Cr. Spring

Student Learning Outcomes
1. Analyze waste and recycling habits in society.
2. Examine composition various wastes streams.
3. Evaluate the design and function of various waste management systems with regards to financial, societal and environmental constraints.
4. Examine waste minimization techniques.

ETS 469 Environmental Systems Modeling
A landscape approach to the dynamics of environmental systems. Graphical modeling of the hydrology of stream flow, water quality, and wetland restoration in an agricultural watershed.
Prereq.: ETS 260 3 Cr. Spring

Student Learning Outcomes
1. Describe the strengths and weaknesses of using models for understanding, prediction, and communications.
2. Explain the concepts of systems thinking and systems dynamics.
3. Apply STELLA (a dynamic modeling software that uses a graphical interface) to the solving of environmental problems.
4. Use the internet to identify and use additional STELLA-related resources.

ETS 482 Renewable/Nondepletable Energy
Evaluation of energy resources including environmental, social, political, and economic considerations; synthesis and evaluation of renewable resource potential/rationale.
3 Cr. Spring

Student Learning Outcomes
1. Develop a list of Pros and cons for each type of alternate energy.
2. Identify and justify alternative energy sources to replace fossil fuels.
3. Compare and contrast economic impacts on the US of various alternative energy sources.
4. Select appropriate strategies for alternative energy in Minnesota.
5. Calculate power values for conventional and alternative energy sources.
6. Recommend a +best practices+ implementation of alternative energy for developing nations.

ETS 485 Transportation Academy Workshop
Systems, modes and impacts of transportation in society. Tours of transportation facilities in land, air, space and marine transportation systems. Creating transportation activities for classroom use.
3 Cr. Summer

Student Learning Outcomes
1. Study and evaluate various modes of transportation.
2. Develop and present a curriculum unit related to transportation industry.
3. Visit and report on various transportation industries.

Environmental Engineering (ENVE)

ENVE 481 Environmental Engineering Project Design 2
Continuation of a team engineering design project sequence under faculty supervision. Typical problems environmental engineers solve in the field. Ethics, project management, and life-cycle analysis. Presentations and formal technical report.
Prereq.: ENVE 480 Coreq.: ENVE 427 3 Cr. Spring

Student Learning Outcomes
1. Apply principles from mathematics; physical, chemical, and biological sciences; and engineering to definition and solution of a complex environmental problem 2. Design an investigation, combining desktop and field- or laboratory-based experiments, to produce information necessary to design targeted systems or processes 3. Design one or more processes or systems employing scientific and

engineering principles in concert with economic and life cycle analysis principles 4. Contribute to the workings of a design team 5. Employ modern computational tools in numeric analyses 6. Integrate principles from economics, social sciences and humanities into the design process 7. Manage the efforts involved in producing the final design product 8. Communicate the processes employed in and results of analyses of environmental processes in written form 9. Examine ethical questions and analyze actions relative to a code of ethics

ENVE 328 Environmental Systems Analysis

Analyses of coupled processes in engineered and natural systems, computer-based numeric modeling, design and conduct of laboratory experiments, analysis and interpretation of results.
Prereq.: ENVE 327 4 Cr. Spring

Student Learning Outcomes

1. Apply principles from chemistry and engineering to the analysis of coupled sets of processes operative in engineered and natural environmental systems 2. Design and conduct laboratory-based experiments, analyze data and interpret experimental results 3. Analyze chemical, microbial, and transport processes operative in natural systems to develop quantitative understandings of the behavior of selected engineered and natural systems 4. Employ modern computational tools in numeric analyses 5. Communicate the processes employed in and results of analyses of environmental processes in written form

ENVE 201 Introduction to Environmental Engineering

Water supply and treatment, wastewater management, water resource systems management, air quality and emissions control, and management of solid and hazardous wastes. Local, regional and global significance and consequences of pollutant releases.
3 Cr. Fall GOAL AREA 10: ENVIRONMENTAL ISSUES

Student Learning Outcomes

1. Explain the basic structure and function of various ecosystems and human adaptive strategies within those systems.
2. Discern patterns of interrelationships of bio-physical and socio-cultural systems.
3. Describe the human institutional arrangements (social, legal, political, economic, and religious) that deal with environmental and natural resource challenges.
4. Analyze environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions
5. Propose and assess alternative solutions to environmental problems including issues involving sustainability.

ENVE 427 Biological Process Design

Microbial process analysis and design with applications involving engineering economics and life-cycle analysis.
Prereq.: ENVE 426 and BIOL 206 3 Cr. Spring

Student Learning Outcomes

1. Apply principles from chemistry, microbiology, biochemistry and engineering to definition and solution of environmental problems 2. Design engineered processes and systems employing chemical and microbial principles in concert with economic and life cycle analysis principles 3. Analyze chemical and microbial processes operative in natural systems to to design strategies for mitigation of environmental contamination 4. Employ modern computational tools in numeric analyses
5. Communicate the processes employed in and results of analyses of environmental processes in written form

ENVE 327 Environmental Engineering Process Analysis

Mathematical, scientific, and engineering principles and applications in water and wastewater treatment, water resources management, environmental systems remediation, and air quality control. Environmental chemistry, material balance, biotic and abiotic kinetics, interfacial mass transfer, and environmental contaminants.
Prereq.: CHEM 211, ENVE 201 Coreq.: MATH 327
4 Cr. Fall

Student Learning Outcomes

1. Apply principles from mathematics, natural sciences and engineering to the definition and solution of environmental problems 2. Develop and assimilate key conceptual physical, chemical, and microbial models addressing processes operative in environmental systems to design engineered systems 3. Conduct experiments, analyze data and interpret results to gain key empirical understandings of environmental processes
4. Integrate concepts from key social sciences into engineering analyses to evaluate solutions in a global

and societal context 5. Collaborate while performing, analyzing, and documenting laboratory experiments. 6. Employ modern computational tools in numerical analyses 7. Communicate the processes employed in and results of analyses of environmental processes in written form

ENVE 426 Physical and Chemical Process Design

Physical and chemical process analysis and design with applications involving engineering economics and life-cycle analysis.
Prereq.: ENVE 328 and MME 303 3 Cr. Fall

Student Learning Outcomes

1. Apply principles from chemistry, natural physical sciences, and engineering to the definition and solution of environmental problems 2. Design engineered processes and systems employing physical and chemical principles in concert with economic and life cycle analysis principles 3. Analyze physical and chemical processes operative in natural systems to design strategies for mitigation of environmental contamination 4. Employ modern computational tools in numeric analyses
5. Communicate the processes employed in and results of analyses of environmental processes in written form

ENVE 480 Environmental Engineering Project Design 1

Team engineering design project sequence under faculty supervision. Typical problems environmental engineers solve in the field. Ethics, project management, and life-cycle analysis. Presentations and formal technical report.
Coreq.: ENVE 426 3 Cr. Fall

Student Learning Outcomes

1. Apply principles from mathematics; physical, chemical, and biological sciences; and engineering to definition and solution of a complex environmental problem 2. Design an investigation, combining desktop and field- or laboratory-based experiments, to produce information necessary to design targeted systems or processes 3. Design one or more processes or systems employing scientific and engineering principles in concert with economic and life cycle analysis principles 4. Contribute to the workings of a design team 5. Employ modern computational tools in numeric analyses 6. Integrate principles from economics, social sciences and humanities into the design process 7. Manage the efforts involved in producing the final design product 8. Communicate the processes employed in and results of design efforts in both oral and written form 9. Examine ethical questions and analyze actions relative to a code of ethics

ENVE 202 Applied Numerical Methods

Applications of numerical and statistical methods in analyses of environmental problems with introductions to programming of Excel and MathCAD worksheets.
Prereq.: Math 221 and either GENG 102 or CNA 267
3 Cr. Spring

Student Learning Outcomes

1. Create Excel worksheets to perform computations 2. Create MathCAD worksheets to perform computations 3. Apply explicit methods for solving sets of relations 4. Apply iterative processes for solving implicit relations and sets of relations
5. Employ numerical methods to integrate and differentiate mathematical functions and to approximate solutions to differential equations
6. Analyze data using statistical methods

Entrepreneurship

ENTR 200 Principles of Entrepreneurship

Entrepreneurship and intrapreneurship; planning, initiating, and developing ventures for business, the arts, science/technology, and related fields.
3 Cr. DEMAND GOAL AREA 8: GLOBAL PERSPECTIVES

Ethnic Studies (ETHS)

ETHS 111 Race in America (Diversity/RIS)

Exploration of the contemporary meanings of race in America. Examination of how social forces shape racial meanings and relationships and the consequences for individuals and communities.
3 Cr. Fall | Spring | Summer GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

ETHS 201 Introduction to Ethnic Studies (Diversity/RIS)

A multidisciplinary introduction to the study of people of color in American society.
3 Cr. Fall | Spring GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

ETHS 205 Introduction to Chicano/a Studies (Diversity/RIS)

An interdisciplinary introduction to the Chicano/a (Mexican-American) experience and to the field of

Chicano/a Studies.
3 Cr. Fall GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

ETHS 210 Introduction to American Indian Studies (Diversity/RIS)

Introduction to the study of American Indians, their experiences, history, culture and contemporary issues.
3 Cr. Fall | Spring GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

ETHS 215 Introduction to Asian American Studies (Diversity/RIS)

Asian Americans, their experiences, history, culture, and contemporary issues.
3 Cr. Fall | Spring GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

ETHS 220 Introduction to African American Studies (Diversity/RIS)

Interdisciplinary approach to the African American experience and the field of African American Studies.
3 Cr. Fall | Spring GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

ETHS 301 Special Topics in American Indian Studies

Special topics related to the lives of American Indians. Topics will vary. May be repeated to a maximum of 9 credits with different topics.
3 Cr. DEMAND GOAL AREA 6: HUMANITIES AND FINE ARTS

ETHS 305 Topics in Ethnic Studies

Select topics, issues, developments and concerns affecting Asian-American, Black, Latino and American-Indian communities. May be repeated to a maximum of 12 credits with different topics.
Coreq.: 1-3 Cr. DEMAND

ETHS 307 Chicano/a Cultural Expressions

Cultural expressions within Chicano/a populations of the U.S. Indigenous aspects of Mexican culture and tradition. Cultural characteristics as manifested in traditions, customs, social character, artistic and creative expression and language.
3 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

ETHS 308 African American Cultural Expressions (Diversity)

Overview of African American cultural expressions as responses to practices of institutional racism. Examines the absorption of African American expression into U.S. culture.
3 Cr. DEMAND GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

Student Learning Outcomes

1. Describe the roles of agency and activism in the lives of African Americans.
2. Provide examples of diverse scholarship among and within African Americans.
3. Recognize and distinguish historical settings and examine governmental policies resulting in the cultural expressions of African Americans.
4. Identify and distinguish various forms of artistic, literary, and cultural expressions of African Americans.
5. Refine analytical, written, critical thinking and research skills in the cultural study of African Americans.

ETHS 310 American Indians in the Social Science Curriculum (Diversity/RIS)

Historical, political, social, cultural, and specifically educational information about Minnesota's tribal communities. Meets Racial Issues and Social Science licensing requirement.
3 Cr. Spring | Summer GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

Student Learning Outcomes

1. Describe why indigenous nations are recognized as sovereign nations.
2. Analyze treaties and how they function.
3. Identify causes and effects stereotypes have on indigenous people.
4. Summarize in writing the differences between race, racism, prejudice, discrimination, colonization.
5. Identify and differentiate between the tribal entities in Minnesota.

ETHS 312 American Indian Women's Lives

Lives of Indian women from several cultures, historical and contemporary perspectives, stories, experiences, and histories.
3 Cr. Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ETHS 313 Hmong Culture and Society

Hmong history and sociocultural issues from a comparative perspectives of the Hmong communities in Asia and the diaspora communities

in the Western world, their migration patterns, contemporary issues, and transnational movements.
3 Cr. DEMAND

Student Learning Outcomes
1. Examine the varieties of multidisciplinary approaches and theories which have been applied in Hmong Studies, as well as of the principal findings that have been generated in consequence.
2. Synthesize the issues faced by the Hmong of America and in the other nations in which they have settled.
3. Demonstrate knowledge of Hmong history, culture, and society.
4. Demonstrate appreciation for the contributions made by the Hmong both in American and other world societies.

ETHS 315 Topics in Asian Homelands and/or Diaspora Communities

Historical, economic, sociocultural, and political impacts of various transnational movements on specific Asian nations and their peoples. May be repeated with different nations to max. of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate knowledge of international affairs and expanded appreciation for alternative worldviews.
2. Evaluate race, ethnicity, class, and gender from a transnational perspective.
3. Examine Asian ethnicity in Asian homelands, most especially with respect to the Asian American communities of the United States.
4. Analyze the historical, economic, sociocultural, and political impacts of colonialism and Westernization in Asia.
5. Demonstrate enhanced knowledge of personal heritage acquired through visits to ancestral homelands for Asian American participants.

ETHS 325 Study Abroad in the Americas

Teachings of non-western indigenous cultures of the Americas.
3 Cr. DEMAND

Student Learning Outcomes
1. Investigate their own cultural values and biases and how these impact their ability to work with indigenous people of the Americas.
2. Incorporate specific historical, cultural, geopolitical, economic, and/or social knowledge into academic and personal contexts.
3. Analyze issues with appreciation for complex and disparate viewpoints.
4. Practice skills to appreciate and analyze visual, historical and experiential cultural products of indigenous cultures within the Americas.
5. Reflect on and evaluate the travel experience and identify personal growth in response to experiences in another culture that informs on and challenges world views.

ETHS 335 Asian Pacific American Women (Diversity)

History of Asian Pacific American women; impact of military and wars, globalization; identities and representation; contemporary issues that Asian Pacific American women face; activism.
Prereq.: Select one: ETHS 201, ETHS 215 or WS 201 3 Cr. Odd Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ETHS 345 Asian Pacific Americans in Popular Culture (Diversity)

Representations of Asian Pacific Americans in historical and contemporary U.S. popular culture and self-representations of Asian Pacific Americans.
Prereq.: ETHS 201 or ETHS 215 3 Cr. Even Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 6: HUMANITIES AND FINE ARTS

ETHS 350 Minorities in Latin American (Diversity)

An investigation of the position of minorities in contemporary Latin America, principally Afro-Americans and Amerindians, utilizing a comparative and interdisciplinary approach.
3 Cr. Spring

ETHS 401 Senior Seminar

Investigation, through reading, discussion, and/or field experience of a topic or issue relevant to the American minority experiences. Synthesis of concepts, data and analysis from specialized minority studies courses through reading, discussion, research, and/or field experience.
Prereq.: ETHS 201 3 Cr. Spring

ETHS 405 Women of Color (same as WS 405)

Examination of historical and contemporary issues facing American Indian, African-American, Asian American, Latina and immigrant women living primarily in the United States. The impact of race, gender, class, and other social inequalities on the

lives of women of color will be discussed.
Prereq.: One of WS 201, ETHS 201, ETHS 205, ETHS 210, ETHS 215, ETHS 220 or WS 201. 3 Cr. Fall

Student Learning Outcomes
1. Identify historical and contemporary issues surrounding Women of Color living primarily in the United States.
2. Apply feminist theories and concepts to explain factors that shape and reshape the experiences of Women of Color in the U.S.
3. Examine the impact of the political, economic, and cultural construction of +Otherness+ on the lives of Women of Color in the U.S. from a feminist perspective.
4. Analyze the lives of Women of Color at the intersection of race, class, gender, sexuality etc. against the backdrop of colonialism, slavery, and present day globalization.
5. Reflect on how their own social locations and cultural values impact the ways in which they understand and engage in issues about Women of Color.

ETHS 407 Contemporary Issues in Chicano/a Studies

Contemporary research and theory on the Chicano experience.
Prereq.: ETHS 205 3 Cr. DEMAND

Student Learning Outcomes
1. Apply contemporary research and theory used in the field of Chicana/o Studies.
2. Identify the social, cultural, political, and economic stakes involved in the formation of Chicana/o Studies.
3. Demonstrate strong articulation and critical thinking skills to examine the multiple ways that Chicana/os have been defined in the US and understand Chicana/o contributions to the larger US society.

ETHS 408 Major Works in African American Studies (Diversity)

A multidisciplinary examination of landmark works in African American Studies addressing effects of institutional racism upon African Americans. Serves as the capstone course.
3 Cr. DEMAND GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

Student Learning Outcomes
1. Describe the roles of agency and activism in the lives of African Americans.
2. Provide examples of diverse scholarship among and within African Americans.
3. Recognize and distinguish historical settings and examine governmental policies resulting in the studied academic scholarship of African Americans.
4. Refine analytical, written, critical thinking and research skills in the study of academic works by African Americans.
5. Compare and contrast the strengths and weaknesses of the arguments or theses among the authors of African American academic scholarship.

ETHS 410 Contemporary American Indian Issues

Contemporary theory and research on the American Indian experience within a global and historic context.
3 Cr. Fall

ETHS 425 Contemporary Asian Pacific American Issues (Diversity)

Diaspora and immigration; relations to other groups of color; anti-Asian movements; identities and representations; Model Minority Myth; activism; achievement/contributions of Asian Pacific Americans.
Prereq.: ETHS 201 or ETHS 215 3 Cr. Even Fall GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

ETHS 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Apply principles of graphic design, art, or art history in a professional environment.
2. Engage in professional practice.
3. Describe and evaluate their internship experience.

ETHS 470 The Black Community (Diversity/RIS)

Examination and analysis of contemporary issues facing Black American communities.
3 Cr. Spring GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

ETHS 472 Topics/Fieldwork in Asian Homelands or Diaspora Communities

Travel and field experience in Asian Homelands or Diaspora Communities. May be repeated with different nations to max. of 9 credits.
Prereq.: ETHS/ANTH 315 for ETHS/ANTH 472 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate knowledge of international affairs and expanded appreciation for alternative worldviews.
2. Evaluate race, ethnicity, class, and gender from a transnational perspective.
3. Examine Asian ethnicity in Asian homelands, most especially with respect to the Asian American communities of the United States.
4. Analyze the historical, economic, sociocultural, and political impacts of colonialism and Westernization in Asia.
5. Demonstrate enhanced knowledge of personal heritage acquired through visits to ancestral homelands for Asian American students.

ETHS 475 Latina/o Communities

Issues in community development for Latinas and Latinos in the United States--focusing on the Midwest--with special emphasis on gender, neighborhoods, grassroots community organizations, local history, and political participation.
3 Cr. Fall

ETHS 490 Native Studies Summer Workshop for Educators

Awareness, sensitivity and knowledge of American Indian histories, cultures, and languages in classrooms and other educational settings. .
Coreq.: 2-3 Cr. Summer

Film Studies (FS)

FS 175 Film and Culture

Movies as art, market products, and cultural artifacts. Visual and auditory design of movies, audience appeal of moviegoing, and reciprocal influence of movies and society.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

FS 260 The Art of Film

Critical analysis of film style and technique with particular attention to cinematography, editing, narrative structure, mise-en-scene, and sound.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

FS 264 Studies in Film

Selected course topics include screen censorship in the U.S., gay and lesbian cinema, spirit of childhood, science fiction, laughing in tongues (international comedy), and film remakes. May be repeated without repetition of content, to a maximum of 12 credits.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Analyze a specific issue or genre of film from an historically-informed perspective.
2. Identify points of controversy and contention in the evolution of the issue or genre of film.
3. Articulate their own critical perspective on the issue or genre of film.

FS 270 Digital Filmmaking

Introduction and application of the different production styles of experimental, narrative, and documentary films through all phases of production.
4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

Student Learning Outcomes

1. Apply appropriate technical solutions to specific film production challenges.
2. Create short films which meet particular aesthetic objectives.
3. Evaluate their own creative work and that of others using discipline-specific criteria.

FS 294 International Cinema

Films from diverse cultures and nations; aesthetics and ethics of crucial filmmakers in their cultural, historical context.
4 Cr. Fall

Student Learning Outcomes

1. Analyze the films and socio-political contexts of 10-12 different national cinemas.
2. Evaluate films from auteurist, global, and cross-cultural perspectives.
3. Synthesize and find connections among the numerous films, themes, and cultures represented during the course of the semester.

FS 360 Screenwriting

Principles and practices of screenwriting: may include short and feature narratives, experimentals and documentaries.
3 Cr. DEMAND

FS 370 Digital Filmmaking II
Film-making techniques analyzed and applied as students create short films Allows students to focus on cinematography, sound, editing, etc.
4 Cr. DEMAND

Student Learning Outcomes
1. Use appropriate aesthetic and theoretical techniques to make films.
2. Work collaboratively and individually to complete film projects.
3. Analyze and apply appropriate camera and recording techniques for quality image and sound control.

FS 394 National Cinemas
One nation's or culture's cinema, specific periods or aesthetic movements. May be repeated, without repetition of content, to a maximum of 12 credits.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Recognize crucial historical political and cultural landmarks of the nation studied.
2. Explore the cinematic history and relevant artistic movements of the nation studied.
3. Appreciate the specific aesthetics and ethics of numerous filmmakers whose vision shaped the cinematic history of the nation studied.

FS 395 Great Directors
Career, style and technique of one or two major directors (Hitchcock - Almodovar - Kurosawa, among many others). May be repeated, without repetition of content to a maximum of 12 credits.
3 Cr. Fall | Spring

FS 401 Special Topics in Film Studies
Variable credit advanced film topics course. May be repeated with change of topic up to 12 credits (only 6 of which may count toward the FS major or minor).
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Identify and discuss the fundamental principles, terminology and parameters of a special film topic.
2. Examine current practices in specific creative techniques or in scholarly research methodologies.
3. Analyze and apply the theory and principles of the course topic in projects or papers.

FS 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

FS 451 Film History I
First few decades of the motion picture from its 19th century origins to its development into a worldwide cultural force by the end of the 1930s.
3 Cr. Fall | Spring

FS 452 Film History II
Evolution of the motion picture from 1940 to 1970 with emphasis on seminal aesthetic movements.
3 Cr. Fall | Spring

FS 461 Seminar in Film Studies
Research in the interrelationships inherent in film history, theory, and criticism. Group and individual conferences, discussions, reports, projects.
Permission of instructor.
3 Cr. Spring

FS 464 Advanced Studies in Film
Selected topics such as film criticism, genres, censorship, politics, teen films, melodrama, and women in cinema. May be repeated, without repetition of content, to a maximum of 12 credits.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze a genre, an issue, or a thematic combination of films from historically-informed perspectives.
2. Examine the aesthetic, cultural and socio-political contexts of a body of filmic work.
3. Synthesize and find connections among the numerous films, filmmakers, and cultural traditions represented in the course.

FS 470 Filmmaking III
Students will work in groups to write, produce, shoot, edit and distribute a short film. May be repeated to a maximum of 8 credits.
3 Cr. DEMAND

FS 474 Topics in Filmmaking

Diverse approaches to the art of film making. May be repeated with a change of topic for a maximum of 20 credits, only 12 of which can be counted toward the film studies major or minor.
Coreq.: 1-4 Cr. DEMAND

FS 490 Writing with Image and Poetry I

3 Cr. DEMAND

Student Learning Outcomes
1. Analyze the relationships between text and image
2. Apply theoretical knowledge to practice
3. Analyze the creative process 4. Evaluate the differences between individual and collaborative creative and analytical dynamics

FS 491 Writing with Image & Poetry II

Analysis, practice and performance of text as image and image as text.
Prereq.: FS 490 3 Cr. DEMAND

Student Learning Outcomes
1. Analyze the relationships between text and image
2. Apply theoretical knowledge to practice
3. Analyze the creative process 4. Analyze performance process 5. Apply analytical knowledge and practices to performance dynamics

FS 496 Film Theory

Major theories of cinema. The chief schools of thought from early formalism to contemporary post modernism. Successful completion of this course will fulfill the Upper Division Writing Requirement for Film Majors. Permission of instructor.
3 Cr. Fall

Student Learning Outcomes
1. Identify, critique, and distinguish among the major schools of film theory.
2. Dissect the logic and argumentation strategies of leading film theorists.
3. Test the relevance and validity of established film theories against new films.

Finance, Insurance & Real Estate (FIRE)

FIRE 201 Introduction to Money Management

Managing personal wealth. Making the most of available financial resources through informed decisions about saving, investing, borrowing, and use of insurance to manage risks.
3 Cr. DEMAND

Student Learning Outcomes
1. Identify the necessary inputs needed to structure and solve a variety of personal finance problems necessary for intelligent decision making in both class structured problems and in problems relating to real-world financial situations.
2. Research and identify financial internet websites and sources in order to find market-based input information necessary to use as input data used to solve a variety of personal finance problems necessary for intelligent decision making in both class structured problems and in problems relating to real-world financial situations.
3. Locate and evaluate reliable sources of information pursuant to SLOs #1 and #2.
4. Differentiate between public domain and restricted-use information in solving personal financial problems.

FIRE 371 Managerial Finance

Basic concepts in finance: Time value of money, financial ratio analysis, and security valuation. Corporate financial decisions: capital budgeting, choice of capital structure, and working capital management.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Describe the basic types of financial management decisions, the role of financial managers, alternative forms of business organization, and agency relationships.
2. Calculate and analyze financial ratios based on firms' financial statements.
3. Describe the characteristics of stocks & bonds and calculate the value of different investment instruments such as perpetuity, annuity, stocks, and bonds by applying the time-value-of-money concept.
4. Describe the relationship between risk and return and the benefits of diversification, and calculate and analyze the different measures of risk.
5. Compute a company's cost of capital/debt/equity and evaluate a project using capital budgeting decision rules.

FIRE 372 Entrepreneurial Finance

Financial issues affecting start-up companies; venture capital markets; private equity and debt financing; valuing small companies; harvesting methods.
Prereq.: FIRE 371 3 Cr. Fall

Student Learning Outcomes

1. Describe the basics of financial management of an entrepreneurial opportunity.
2. Differentiate the sources of financing for entrepreneurial opportunities, from development to startup to expansion.
3. Classify how investors, both lenders and equity investors, analyze opportunities to fund entrepreneurial ventures.
4. Demonstrate proficiency in a number of financial calculations related to entrepreneurial opportunities, including those used to assess financial performance and to value the opportunity.

FIRE 373 Investment Principles

Types of investment securities; security market operations; investment policies; security analysis and valuation principles: risk, return, and portfolio analysis; personal investment principles.
Prereq.: FIRE 371 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify and research a variety of sources of financial and investment information.
2. Explore historical risk and return data for various asset classifications in order to examine and evaluate different valuation techniques.
3. Participate in a security selection exercise (stock game) in which: using information from 1 and 2 above students will select an investment which they will enter as an individual game selection within their class section, and, as a group, each section of FIRE 373 will collaborate on and construct, a class portfolio with which to compete against other sections of FIRE 373, if any, as well as against an appropriate market benchmark. In doing so the student will begin to perform the tasks of the professional money manager.
4. "Be able to recognize the ""Global Process of Investment Management"", or the correct procedure to manage personal wealth throughout one's lifetime."

FIRE 375 Risk Management and Insurance

Management of risk in a business setting; control of property, liability, and personnel risks; risk financing including self insurance, group retention and insurance, decision-making: introduction to the insurance industry.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Define risk and uncertainty, calculate various measures of risk, and apply the risk measures in risk evaluation and analysis.
2. Identify and apply basic risk management process and methods.
3. Describe the structure of the insurance industry, insurance regulation, insurance market, and the key features and coverage of various types of insurance.

FIRE 378 Real Estate Principles

Introductory real estate: contracts, finance, investment, appraisal, owning vs. renting, taxation and closings. Approved for pre-license education under Ch. 82, MN Real Estate License Law.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Calculate a mortgage payment, principal balance, and the interest paid on a mortgage loan over a given period of time.
2. Calculate how much an investor would pay for a mortgage given the mortgage terms and the required rate of return.
3. Evaluate the benefits of each of the three approaches of determining value in the appraisal process.
4. Construct a cash flow analysis of a building given the rents, vacancy rate, operating expenses, and financing information.
5. Identify the important ratios used in real estate investment analysis.

FIRE 386 Real Estate Property Management

Techniques and scope for property management. Owner relations, record keeping, marketing and leasing, tenant administration, maintenance, and staffing, management of residential, commercial and office properties.
Prereq.: FIRE 378 or permission of department 3 Cr. Fall

Student Learning Outcomes

1. Examine the various property types and discuss the unique challenges of managing each type.
2. Evaluate the critical role of the real estate manager.
3. Create a management plan that demonstrates how to manage a property through property owners' objectives.
4. Assess innovative uses of electronic, social, print and other media as a recruiting and marketing tool for real estate.

5. Compose and evaluate sound practices for the physical and financial management of property.

FIRE 427 International Accounting and Finance

On the basis of the analysis of annual reports, students will be given an overivew of the differences existing in financial reporting systems in foreign countries. Insight into the state-of-the-art techniques in risk adjusted capital budgeting.
Prereq.: ACCT 291, ACCT 292, FIRE 371 3 Cr.
DEMAND

Student Learning Outcomes

1. Describe the determination of exchange rates and the demand & supply for any currently. (On-campus) 2. Describe the differences among spot, forward and swap transactions. (On-campus) 3. Examine the effect of exchange rate changes. Apply the exchange rate parity conditions and forecast the exchange rates. (On-campus) 4. Examine the cross exchange rates and the opportunities arising from intermarket arbitrage. (On-campus) 5. Describe the international monetary system and exchange rate regime of the countries visited. (Study Abroad) 6. Describe the business environment in the countries visited. (Study Abroad) 7. Describe foreign investment opportunities in the countries visited. (Study Abroad)

FIRE 444 Internship in Business

Participation in a full-time paid position with a cooperating business, governmental, or civic organization whose program has been approved in advance by the department in which the student has an approved major. Credits are provided upon completion of all requirements of which 3 credits applied to the required electives under the major program and the remaining credits apply to university electives for graduation. Permission of department.
Coreq.: 3-15 Cr. Fall | Spring | Summer

FIRE 471 Corporate Financial Policies

Corporate financial decision making; adjustments to changing conditions; market structure and corporate capital instruments; capital market movements and financial decisions.
Prereq.: FIRE 371 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Calculate the time value of money using financial calculators.
2. Apply TVM concepts to different areas of corporate finance.
3. Evaluate and understand the term structure of interest rates.
4. Evaluate and understand various corporate financing strategies.
5. Analyze projects using the tools of capital budgeting.
6. Estimate the cost of capital of publicly traded firms.

FIRE 472 Financial Institutions

Role in the economy; current issues/controversies in banking and intermediation; international aspects of financial intermediation.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Compute realized yield to maturity for a coupon bond.
2. Compute duration and modified duration for a coupon bond and use this measure to indicate bond price sensitivity, construct portfolio immunizations and to estimate new bond price.
3. Compute yields on various money market securities.
4. Perform/calculate currency arbitrage in a bid ask market.
5. Compute the clean and dirty price of a coupon bond.

FIRE 473 International Finance

Foreign exchange, currency and derivative markets, currency risk management, international investment and financing decisions, multinational corporate financial decisions.
Prereq.: FIRE 371 3 Cr. Fall

Student Learning Outcomes

1. Understand the international parity conditions.
2. Understand currency-forecasting techniques.
3. Characterize the tools of hedging currency risk.
4. Explain the determination of exchange rates and the demand and supply for currencies.
5. Analyze the interaction between changing currency values, cross exchange rates and opportunities arising from inter-market arbitrage.

FIRE 474 Security Analysis

Organization of securities markets, risk and return analysis, modern portfolio theory, efficient market theory, fixed income securities, equity securities, and derivative securities.
Prereq.: FIRE 371, FIRE 373 3 Cr. Spring

Student Learning Outcomes

1. Explain the general procedure of the investment process, distinguish between two general approaches to the valuation process, and apply the three-step, top-down approach to the valuation of an individual security.
2. Demonstrate the use of the discounted cash flow valuation technique and the relative valuation technique to determine the value of a common stock in addition to the valuation of bonds and preferred stocks.
3. Describe the major results of modern portfolio theory and the construction of efficient frontier of risky assets and be able to compute the covariance of different pairs of assets, portfolio expected return, and portfolio variance.
4. Apply capital market theory, capital asset pricing model, and multifactor models to estimate the return for a portfolio or an individual security.
5. Describe the asset allocation procedure, the various investment instruments in a global market, the organization of functioning of securities markets, the major uses and construction of stock market and bond market indexes, and discuss the importance of asset allocation decision.

FIRE 475 Life and Health Insurance

Individual life and health insurance and employee benefits; estate and financial planning; insurance company management and operations; regulation; public policy issues.
3 Cr. Fall

Student Learning Outcomes

1. Define human loss exposures and develop appropriate insurance solutions.
2. Describe the key features of various types of life insurance products and insurance contract provisions.
3. Interpret the mechanism of insurance operation.
4. Outline and describe the taxes on insurance products and insurers.

FIRE 476 Property and Liability Insurance

Property and liability risks; contracts, insurance law and regulation; company management and operations.
3 Cr. Spring

Student Learning Outcomes

1. Differentiate and analyze commercial property and liability risk exposures.
2. Identify and summarize all basic operations of an insurance company - ratemaking, underwriting, claims adjusting, loss control, and statutory accounting principles.
3. Assess the functions and placement of reinsurance arrangements.

FIRE 479 Social Insurance

Economic security; public and worker's compensation programs designed to alleviate the perils of premature death, poor health, retirement, unemployment, and poverty. Program structure, financing, policy.
3 Cr. Fall

Student Learning Outcomes

1. Outline the major social insurance programs in the U.S.
2. Apply basic risk management techniques to public risk exposures.
3. Discern the difference between private sector risk management and public sector risk management.

FIRE 480 Employee Benefits and Group Insurance

Employee benefit plan design, group insurance contract provisions, group life and health coverage, pension plans, costs containment, and taxation.
3 Cr. Spring

Student Learning Outcomes

1. Describe the federal and state regulations that shape the discretionary benefit practices.
2. Describe the key features of discretionary and non-descretionary employer-sponsored benefit programs.
3. Interpret the nature of group insurance and the employee benefit design and management.

FIRE 481 Financial Derivatives

Characteristics and functions of financial derivatives. Corporate risk management applications of financial derivatives. Pricing models of derivatives and trading strategies using derivatives to hedge financial risks.
Prereq.: FIRE 371, FIRE 471 3 Cr. Fall

Student Learning Outcomes

1. Outline the main characteristics.
2. Apply the binomial model in option pricing.
3. Solve the option pricing problem using the Black-Scholes-Merton method.
4. Design appropriate option strategies to control equity risk.

FIRE 483 Real Estate Finance and Investments

Cash flows generated by commercial investment real property, from both the lender's and investor's viewpoint. Ratio and return analysis. Primary and secondary mortgage markets.
Prereq.: FIRE 378 3 Cr. Fall

Student Learning Outcomes
1. Identify sources of capital and analyze the types of financing available in today's residential and commercial real estate markets.
2. Acquire a solid understanding of investment cash flow analysis. This will be illustrated by the creation of a cash flow analysis spreadsheet.
3. Learn how to analyze a commercial real estate deal and determine its potential for profitability.

FIRE 484 Real Estate Appraisal

Cost, income, and market approaches to value of real property assets. Professional narrative appraisal employing comparable sales analysis, depreciated cost analysis and discounted cash flow analysis. Professional ethics and uniform standards of professional appraisal practice.
Prereq.: FIRE 378 3 Cr. Spring

Student Learning Outcomes
1. Formulate a complete narrative appraisal of a single family dwelling.
2. Critique each of the 3 approaches in the appraisal process and identify the strengths of each approach.
3. Calculate and apply capitalization rates in the income approach using both market extraction and band of investment techniques.
4. Apply cash equivalency techniques to determine the value of below market rate financing when adjusting a comparable sale in the sales comparison approach.
5. Calculate (estimate) value using a discounted cash flow procedure.

FIRE 487 Management of Financial Institutions

Decision making in commercial banks and other depository institutions. Asset, liability, and capital management issues. Lending, depository and trust functions.
Prereq.: FIRE 371 3 Cr. Spring

Student Learning Outcomes
1. Understand and explain why financial intermediaries exist.
2. Become familiar with and be able to identify the financial statements of a bank.
3. Explain the causes of banking crises around the world.
4. Demonstrate an understanding of banking regulation.
5. Outline the principles of bank lending.
6. Describe the risks in banking and the principles of hedging risk.

FIRE 490 Topics in Finance, Insurance and Real Estate

Cases and/or student research, class involvement. Options and futures, mergers and acquisitions, health care finance, real estate brokerage, capital investment decisions, and emerging issues.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Learning outcomes will vary depending on the topic.

FIRE 491 Managing an Investment Fund

Students manage an actual investment fund for the University Foundation, acting as security analysts, investment advisers, and portfolio managers.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Develop a theoretically-sound set of management objectives for the fund.
2. Collaborate on the development of appropriate asset allocations for the fund's investments.
3. Examine relevant macro-economic and market trends in the current security marketplace.
4. Perform security analysis in the process of filling the fund allocations.
5. "Distinguish between theory and practice and develop intellectually through ""Experiential Learning""."

FIRE 498 Business Consulting

Teams of students work as consultants to area businesses and non-profit organizations to diagnose and solve actual business problems. Written and oral report required.
Prereq.: FIRE 371, MKTG 220, ACCT 292, IS 242 or STAT 242, MGMT 201, or permission of department.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Define the problem to be addressed.
2. Design a proposal to address the problem.
3. Gather data relevant to the situation.
4. Gather and analyze industry data.

5. Formulate recommendations to solve the problem.

Foreign Languages and Cultures (FORL)

French (FREN)

FREN 101 Elementary French I

Basic vocabulary and grammatical structures to prepare students for developing proficiency in the language. Listening, speaking, reading, writing and cultural skills building emphasized. An increased understanding and appreciation of the cultures of the various French-speaking countries. Must be taken in sequence. Intended for students with little or no previous study of French. (Recommended companion course for students considering a major or minor in French: FREN 110).
4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

FREN 102 Elementary French II

Vocabulary, grammatical structures and an introduction to the cultures of the French-speaking world. Emphasis on the spoken language, some reading and writing. Promotes understanding and appreciation of the cultures of the various French-speaking countries. Required lab/library assignments.
Prereq.: FREN 101, placement exam, or equivalent 4 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

FREN 110 Introduction to French Culture

Recommended companion course to 101 and 102. Taught mainly in English. Explores the history of language and diverse cultural, historical and socio-political features of the French and Francophone cultures. Recommended for students who want more contact with modern culture and language. Can be taken concurrently with 101 or 102.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

FREN 201 Intermediate French I

Review and extend the skills of listening, reading, speaking, and writing for purposes of communication using a variety of technological learning aids. Directed towards linguistic and cultural awareness. Special emphasis on extension and application of listening and reading skills strategies using various authentic sources.
Prereq.: FREN 102 or equivalent for FREN 201. FREN 201 or equivalent for FREN 202. 4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

FREN 202 Intermediate French II

Review and extend the skills of listening, reading, speaking, and writing for purposes of communication using a variety of technological learning aids. Directed towards linguistic and cultural awareness. Special emphasis on extension and application of listening and reading skills strategies using various authentic sources.
Prereq.: FREN 102 or equivalent for FREN 201. FREN 201 or equivalent for FREN 202. 4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

FREN 220 Oral and Written Proficiency in French

Practice in speaking and writing skills needed in the second and third year. Required for admission to the major or minor and exit from CPIA. Must be taken before or concurrently with first 300-level course.
2 Cr. DEMAND

Student Learning Outcomes

1. Speak paragraph length discourse in French at the Intermediate level according to the ACTFL (American Council of Teachers of Foreign Languages) proficiency scale.
2. Write paragraph length discourse in French at the Intermediate level according to the ACTFL (American Council of Teachers of Foreign Languages) proficiency scale.
3. Integrate audio and written sources in French into oral and written discourse.

FREN 310 Topics in French Grammar

Written practice based on themes drawn from the contemporary culture of French-speaking countries in film and texts; review and practice of grammar. Directed toward increasing accurate expression in writing. A placement test is recommended. Repeatable up to 9 credits.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will orally express their views of and reactions to the issues presented in the course.
2. Students will compare and contrast different perspectives.
3. Students will describe and analyze socio-cultural

issues.
4. Students will access several media websites and develop research and critical thinking skills on current topics relevant to French and Francophone culture.
5. Students will produce spoken language at the intermediate-mid and intermediate-high levels according to the ACTFL scale.

FREN 331 Francophone Poetry and Film

Analysis of selected poems and films by major French/Francophone authors.
Prereq.: FREN 202 with a grade of C or better. 3 Cr. Fall

Student Learning Outcomes

1. Define basic literary terms and apply them to the study of selected works of poetry.
2. Write narrative and description texts on topics presented on Francophone films.
3. "Incorporate techniques of text analysis such as ""explication de texte"" (poems)." 4. Negotiate language in various formal and informal settings, in partner and groupwork, applying oral and writing skills at the high-intermediate level.
5. Compare and contrast images from text and film, make selections of visual support for in-class discussions.

FREN 345 Topics in French Media

Oral practice based on themes drawn from the media about the contemporary cultures of French-speaking countries; review and practice of grammar. Directed toward increasing fluency and accurate oral expression. Placement test recommended. Repeatable up to 9 credits.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will identify, compare and contrast grammatical structures in authentic texts.
2. Students will apply advanced structures in writing.
3. Students will explain language as a system.
4. Students will analyze language in context.
5. Students will analyze textual meaning through linguistics structures at the intermediate-mid level according to the ACTFL scale.

FREN 411 Advanced Studies in French Literature

Stylistic, philosophical and cultural analysis of a particular work, author or period. May be repeated for a total of 6 credits.
Prereq.: FREN 301, FREN 302 3 Cr. Spring

Student Learning Outcomes

1. Define methods, terms and theories and apply to the task relevant to analyze a selection of texts from different periods or several works by the same author within same period.
2. Describe texts demonstrating awareness of genre, audience and situation.
3. Identify the diverse ethnicity of the French-spealing world and describe how diversity manifests itself in such distinct cultures through language.
4. Interpret information from a variety of authentic cultural sources and perspectives and summarize that information applying both writing and oral skills at the advanced level.
5. Anlayze how diverse political and solcial phenomena impact the cultures of the Francophone world.

FREN 421 Advanced Studies in French Civilization

Intensive study of an aspect of the historical, sociological, artistic, political and intellectual development of the French-speaking peoples. May be repeated for a total of 6 credits.
Prereq.: FREN 302, FREN 331 3 Cr. Spring

Student Learning Outcomes

1. Identify works of art, film or any aspect of the societies involved in the French-speaking countries.
2. Describe works of art, write texts with a purpose: critique.
3. Engage in collaborative projects that require involvement in current issues (politics, history or social sciences).
4. Identify cultural values and cultural differences among France and the former colonies of France.
5. Analyze the richness and diversity of countries where French is spoken, reflect on cultural differences when approaching social values.

FREN 431 Prose

Reading and analysis of prose fiction. Evolution, stylistic and philosophical implications of French prose, through a selection of major texts.
Prereq.: FREN 302, FREN 331 3 Cr. DEMAND

Student Learning Outcomes

1. Compare and contrast a selection of texts, make a distinction between literary genres.
2. Describe literary history and social contexts based on key works of French Prose.

3. Present ideas, opinions or critiques, both orally and in writing at an Intermediate level of proficiency according to the ACTFL scale, based on works of French Prose.
4. Identify key grammatical items to develop argument and persuasion (oral and written skills).
5. Analyze cultural aspects relevant to literary periods or major authors of French Prose.

FREN 432 Drama

How to read, decipher and analyze drama. Historical evolution, stylistic and philosophical implications of French drama, through a selection of major texts.
Prereq.: FREN 302, FREN 331 3 Cr. DEMAND

Student Learning Outcomes

1. Explore and analyze a selection of plays from a particular period or major author from the French-speaking countries.
2. Identify and explore technical aspects of dramatic representation.
3. Identify characters, types and discourse in plays from a particular period.
4. Apply knowledge of a play's socio-historical and cultural context in a written analysis.
5. Present oral and written analyses of French prose at an Intermediate level of proficiency according to the ACTFL scale; oral skills and pronunciation (listening and/or viewing of recorded performances).

FREN 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

FREN 450 Applied Linguistics in French

Introductory contrastive analysis of French and English phonological and grammatical features. Understanding and appreciation of the subtleties of written and spoken French.
Prereq.: ENGL 361 (B.S. majors only), FREN 302 3 Cr. Spring

Student Learning Outcomes

1. Analyze and compare French and English phonological and grammatical features.
2. Practice advanced grammar skills through contextual analysis.
3. Describe how sound patterns work and analyze phonological data in the study of phonetics and phonology.
4. Identify and correct pronunciation problems.
5. Transcribe speech samples.

FREN 454 Teaching French in the Secondary School

Taken concurrently with student teaching. Application of language learning principles in secondary schools. Selection and presentation of daily and unit lessons. Critique based on the theories discussed in FORL 453 BS Capstone course; cannot be used as an elective in BA program.
Prereq.: FORL 453 2 Cr. Fall | Spring

Student Learning Outcomes

1. Produce and evaluate sample lesson plans appropriate for secondary school.
2. Apply linguistic and intercultural techniques appropriate to age and language level of students during clinical experience.
3. Develop meaningful lesson plans for field experience, apply linguistic and intercultural techniques, demonstrate awareness of assessment tools following standards of language proficiency.
4. Develop a professional portfolio at the end of clinical experience, including own materials, class observations by teacher supervisor, colleagues and academic supervisor.
5. Discuss and describe teaching experiences with teaching supervisor and academic supervisor on a regular basis during experience.

FREN 456 Teaching French in the Elementary School

Application of language learning principles to elementary school instruction. Development/selection of materials and practice in presenting them. BS capstone course: cannot be used as an elective in BA program.
Prereq.: FORL 455/555 2 Cr. DEMAND

Student Learning Outcomes

1. Produce and evaluate sample lesson plans appropriate for elementary school instruction.
2. Develop lesson plans which involve a variety of skills and learning styles.
3. Develop meaningful lesson plans that incorporate and demonstrate linguistic proficiency and cultural awareness.
4. Reflect on and describe skills required to complete tasks relevant to the teaching assignments.
5. Describe and apply Second Language Acquisition theory and practice in creation of lesson plans.

FREN 457 Senior Project (BA)

Research-based thesis on selected topics in French literature, linguistics, or culture under the guidance of instructor. Capstone course in transition to graduate studies or career. Taken during last academic year of undergraduate studies.
2 Cr. Fall | Spring

Student Learning Outcomes

1. Identify, describe and analyze (a) cultural, social or literary issue/s pertaining to the culture in French-speaking countries in a research paper that demonstrates at least Intermediate-High level of written proficiency according to the ACTFL scale.
2. Interpret and summarize information and develop perspectives through the use of authentic literature and materials from France and Francophone countries.
3. Formulate a thesis pertaining to (a) cultural, social issue/s or topics in French-speaking countries and compare and contrast various perspectives of the issue or topic.
4. Evaluate and interpret information pertaining to (a) cultural, social issue/s in the French-speaking world.
5. Evaluate their own language with regard to grammar, stylistics and pragmatics, and accurately communicate the interrelationships of language and culture and understand that cultural knowledge and understanding are interdisciplinary.

FREN 460 Study Abroad

Capstone required course for participants in the study abroad program. On-site study of selected aspects of language and/or culture in the host country. Final oral and written report presented in French. Topics determined in consultation with study abroad director.
3 Cr. Spring

Student Learning Outcomes

1. Engage in community sites and observe and describe the cultural and social environment in the host country.
2. Respond critically to works of cultural artifacts and products.
3. Investigate, interpret and describe social, historical and cultural values, products and behaviors experienced and/or observed while engaging in small group projects during the experience abroad.
4. Describe and analyze cultural experiences in personal reflective journals.
5. Design and compile a portfolio that represents and describes especially formative cultural and linguistic experiences during education abroad.

FREN 461 Internship

Use of linguistic ability in a work setting in the US or in a French-speaking country. Combines learning with an apprenticeship experience. Completion of an internship report under the guidance of instructor. May substitute for 457.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Negotiate and engage in activities within the settings of the workplace in French-speaking contexts in US or in French-speaking countries with an acceptable level of French linguistic proficiency.
2. Reflect on and describe the skills required to complete tasks relevant to the position, keep a journal or report of the experience and a portfolio of evaluation by supervisors or peers.
3. Compile and organize a professional portfolio with all relevant aspects of the experience.
4. Engage in and negotiate the activities that occur within the settings of the workplace in French-speaking contexts in US or in French-speaking countries in a way that demonstrates intercultural competence and awareness.
5. Summarize, describe and evaluate improvement in cultural and linguistic proficiency as a result of the internship.

Gender and Women's Studies (GWS)

GWS 201 Introduction to Women's Studies (Diversity)

Women's lives, contributions, and culture; history and social institutions (family, media, schools, etc.) from perspective of women.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

GWS 220 Race and Gender in the U.S. (Diversity/RIS)

Interdisciplinary study of racism and sexism as institutionalized oppressions that shape the experiences of women and men of color in the U.S. Cultural contributions women and men of color have made to society.
3 Cr. DEMAND GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

GWS 270 Feminist Leadership and Social Transformation

Application of feminist leadership styles and strategies for social change.
Prereq.: GWS 201 Coreq.: Cr. Odd Fall

Student Learning Outcomes

1. Cultivate and reflect upon personal transformation and agency.
2. Describe and analyze global issues from a feminist perspective.
3. Apply feminist concepts and principles in advancing social transformation.
4. Evaluate best practices for feminist leadership and transformation.

GWS 305 Topics in Women's Studies

A selected topic in women's studies. Specific topics to be listed in the class schedule. May be repeated under different topics to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Describe sociopolitical trends (historical and/or contemporary) in content area.
2. Describe theories and concepts in content area.
3. Conduct research and apply theories on sociopolitical gender issues in content area.

GWS 315 Feminist Research Methods

Interdisciplinary feminist research methods for developing qualitative and quantitative studies, designing projects, implementing research and presenting results.
Prereq.: GWS 201 3 Cr. Fall

Student Learning Outcomes

1. Identify basic principles and strategies of Feminist Research.
2. Describe and analyze specific feminist research designs and evaluate their usefulness in studying various research topics.
3. Apply feminist conceptual and methodological frameworks to evaluate and articulate what makes research feminist.
4. Analyze ethical issues and concerns related to feminist research process and identify ways to address them.
5. Design and conduct a feminist research study and write a research report to include all major components.

GWS 330 Gender and Popular Culture

Representations of race, class, gender, and sexuality in popular culture. Students will develop critical analytical skills and an understanding of how marginalized groups are portrayed in the media.
3 Cr. DEMAND GOAL AREA 6: HUMANITIES AND FINE ARTS

GWS 340 Global Feminisms

Development of Global feminist movement(s), identifies challenges, and explores the impact of engaging a transnational perspective in understanding and addressing women's issues across cultures. Examines extent to which the empowerment of women is demonstrated through multiplicity of meaning women give to their actions and life experiences in a global context.
3 Cr. Spring GOAL AREA 8: GLOBAL PERSPECTIVES

GWS 345 Practicum in Women's Studies

Application of theory and research to constructive institutional and social change to improve women's lives.
Prereq.: GWS 201 Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Create and outline a discipline-specific project with their advisor.
2. Apply hands-on skills to implement that project.
3. Acquire appropriate leadership and advocacy skills in content area.
4. Apply principles of feminist analysis and organizing to the development of their project.

GWS 405 Women of Color in the U.S. (same as ETHS 405)

Examination of historical and contemporary issues facing American Indian, African American, Asian American, Latina, and immigrant women living primarily in the United States. The impact of race, gender, class, and other social inequalities on the lives of women of color will be discussed.
Prereq.: One of GWS 201, ETHS 201, ETHS 205, ETHS 210, ETHS 215 or ETHS 220. 3 Cr. Fall

Student Learning Outcomes

1. Identify historical and contemporary issues surrounding Women of Color living primarily in the United States.
2. Apply feminist theories and concepts to explain factors that shape and reshape the experiences of Women of Color in the U.S.
3. Examine the impact of the political, economic, and

cultural construction of +Otherness+ on the lives of Women of Color in the U.S. from a feminist perspective.
4. Analyze the lives of Women of Color at the intersection of race, class, gender, sexuality etc. against the backdrop of colonialism, slavery, and present day globalization.
5. Reflect on how their own social locations and cultural values impact the ways in which they understand and engage in issues about Women of Color.

GWS 406 Sexual Assault Advocacy Training

Advocacy skills for sexual assault survivors including: understanding the impact of sexual assault on survivors, the social and cultural context in which sexual assault occurs, and the roles the legal system, law enforcement, social services and medical services play with survivors.
Prereq.: GWS 201 or HURL 201 3 Cr. Fall | Summer

Student Learning Outcomes

1. Explain the social construction of 'rape culture'.
2. Identify the impact sexual violence has on the victim and society as a whole.
3. Apply knowledge on specific ways to assist the victim/survivor of sexual violence.
4. Explain the roles of various professionals involved in the crime of sexual assault.
5. Analyze and evaluate the advocates' role in helping a victim/survivor of sexual violence.

GWS 415 Feminist Theory

Feminist theories and their application to understanding women's lives and social institutions. This course fulfills the Upper Division Writing Requirement for the Women's Studies major with a grade of "C" or better.
Prereq.: 9 credits of gender and women's studies or equivalent. 3 Cr. Spring

Student Learning Outcomes

1. Identify the basic principles of different feminist theoretical perspectives and evaluate the strengths and weaknesses of each.
2. Apply different feminist theoretical frameworks to social issues.
3. Analyze gender issues using feminist theories.
4. Summarize and synthesize feminist theories in both written and oral forms.
5. Practice situating the theories studied within feminist conversations in and outside the classroom.

GWS 444 Internship

Supervised research or training opportunities provided by women oriented social service and government agencies or by women's organizations. Maximum of 4 credits can be counted towards minor.
Prereq.: GWS 201 Coreq.: 3-15 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Practice appropriate professional behaviors in the content area.
2. Acquire hands-on application of theories in the content area.
3. Work directly with women and/or other marginalized groups who are affected by content area.
4. Acquire appropriate leadership and advocacy skills in content area.
5. Describe and evaluate their internship experience.

GWS 485 Capstone Seminar

Integration and application of women's studies key concepts and core knowledge to issues of future careers, personal life, public policy, and the development of women's studies scholarship.
Prereq.: GWS 201, GWS 315, GWS 415 3 Cr. Spring

Student Learning Outcomes

1. Reflect on and synthesize their Women's Studies education in addressing social issues.
2. Implement work by working both individually and collectively on a community project of their choice.
3. Create classroom dialogues that build community, collective and individual responsibility, and enable the democratic sharing of ideas.
4. Reflect upon their feminist values and identify career and life plans after graduation.

General Engineering (GENG)

GENG 101 Ethics and the Engineering Profession (Goal 9) (Same as ECE 101)

Major ethical theories; sources of ethics; professional responsibilities; social impact of engineering ethics; teamwork skills; design; engineering careers.
3 Cr. Fall | Spring GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

GENG 102 Engineering Problem Solving

A programming language appropriate to engineering, such as FORTRAN or C, will be used to

model and simulate problems from engineering disciplines.
Prereq.: MATH 112 or equivalent Coreq.: MATH 113 or equivalent 3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply their knowledge of mathematics, science, and engineering to engineering problems. Students should have a disciplined approach, a problem solving method, to solve engineering problems.
2. Use the techniques, skills, and modern engineering tools necessary for engineering practice.
3. Solve basic problems from mathematics and sciences using computer programming language (such as MATLAB programming) to obtain problem solutions.
4. Design and write a computer program to solve problems containing a few realistic specifications.
5. Write well documented programming codes.

GENG 104 The Engineering Profession Supplemental

Introduction to engineering, teamwork skills, design, and engineering careers.
1 Cr. DEMAND

Student Learning Outcomes
1. Develop effective study skills.
2. Identify and develop a plan of action for different technology based issues.
3. Identify and contrast the various fields of engineering.
4. Organize and manage a study plan to insure success as a student.
5. Communicate technical information.
6. Explain and analyze current and global issues as they relate to engineering.

GENG 360 Manufacturing Economics

Analysis of cost for manufacturing operations, tool-engineering economics, cost estimating, and cost accounting. Economic selection of equipment, small-tools, economic lot sizes, break-even charts. Evaluating production economics and investment alternatives. Principles of Engineering Economics, effects of capital projects.
Coreq.: MME 330 or MME 331 2 Cr. Fall | Spring

Student Learning Outcomes
1. Calculate economic equivalence using interest formulas, tables, and spreadsheets.
2. Apply economic analysis in decision-making.
3. Apply the fundamental concepts of cost estimating.
4. Calculate and compare costs and benefits for an engineering project.
5. Explain engineering issues and their economic impact.

GENG 380 Engineering Communication

Planning, preparation, and critiquing typical engineering communication formats including reports, presentations, letters, memos, meeting agendas, meeting minutes, budgets, manuals, and schedules. Application of software to planning, analysis, and engineering communications.
Prereq.: ENGL 190 or ENGL 191 or ENGL 291
Coreq.: Cr. Fall | Spring

Student Learning Outcomes
1. Write professional project proposals with integrated project schedules, budgets, drawings, and equations.
2. Produce, deliver, and critique professional written and oral engineering reports.
3. Effectively merge various engineering software outputs into engineering communications.
4. Write professional meeting agendas, meeting minutes, memos, letters, and instruction manuals.
5. Apply professional ethical standards to engineering communication.

Geography and Planning (GEOG)

GEOG 106 People and the Planet

Human impact on the biosphere, lithosphere, hydrosphere and atmosphere. Case studies of current environmental issues emphasizing the interrelationship between human systems and natural systems on the global and local scales.
3 Cr. Fall | Spring GOAL AREA 10: ENVIRONMENTAL ISSUES

Student Learning Outcomes
1. Students will describe the basic structure and function of four key spheres on our planet; atmosphere, hydrosphere, lithosphere, and biosphere. They will utilize a range of tools to discern the human adaptations and impacts made on those systems.
2. Students will construct a vision of patterns and interrelationships of bio-physical and socio-cultural systems by engaging with material presented in class through diverse instructional means and strategies.
3. Students will use social, legal, political, and economic data to analyze the degree of the human

world's connection to the natural world in all four spheres using both global and local examples.
4. Students will be able to critically analyze and evaluate sources of conflicting information with respect to environmental issues (e.g. global warming or end of the age of petroleum).
5. Students will articulate and assess alternative solutions to environmental problems in their work.

GEOG 111 Introduction to Global Geography (Diversity)

Global geographic thinking; understanding of global patterns.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

GEOG 144 Travel and Tourism Internship Seminar

Policies and expectations for completing an internship (domestic/international) in the Travel and Tourism program. Must be taken the semester prior to the beginning of the internship.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate knowledge of the various sectors within the travel and tourism industry.
2. Apply classroom learning to international and regional destinations through internships.

GEOG 216 Principles of Geographic Information Science

Basic principles, concepts and technology that are universal to all parts of Geographic Information Science and geographic information systems software. Integrated Lab. The department offers an examination for credit option for this course.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify and describe the purpose and function of the various GI Science components (Geographic Information Systems, Global Positioning Systems, Land Surveying, Remote Sensing, and Cartography).
2. Describe the basic concepts of a map projection and be able to distinguish between some of the major map projections.
3. Apply various coordinate systems such as latitude/longitude (in both decimal degrees and DMS forms), Universal Transverse Mercator, and State/Plane.
4. Develop different map types (choropleth, topographic, etc.) as well as components of a map and the principle of map scale.
5. Identify and analyze local and regional features using topographic maps.
6. Critically evaluate information and its sources on maps to determine information reliability and accuracy.
7. Create maps using modern GIS software.

GEOG 253 Theories and Concepts in Geography

Philosophy, theories, concepts, methods, and techniques in the study of geography; recommended for Minnesota social studies teacher certification.
3 Cr. DEMAND

Student Learning Outcomes

1. Synthesize map components and map types: grid systems, projections, thematic maps, topographic maps.
2. Demonstrate global patterns of tectonic and gradational forces.
3. Identify and map factors influencing global patterns of air temperature and pressure, and subsequently the various climatic types and their locations.
4. Identify and map global patterns of renewable, nonrenewable and perpetual resources.
5. Identify and map global patterns of factors influencing population growth such as; birth rates, death rates, and the demographic transition.
6. Demonstrate knowledge of spatial interaction in its various forms.
7. Demonstrate knowledge of global patterns of political boundary types, centrifugal and centripetal forces impacting states.
8. Demonstrate knowledge of global patterns of primary, secondary and tertiary economic activities.

GEOG 270 Introduction to Cultural Geography (Diversity)

Examines a range of concepts, themes, and approaches geographers have used to explore how cultural ideas, practices and forms interact with particular spaces, places and landscapes.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

GEOG 271 Economic Geography

Spatial patterns and organization of economic activities. Topical.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

GEOG 272 Physical Geography

Geographical description of spatial characteristics associated with the Earth's hydrosphere, biosphere, atmosphere, and lithosphere.
3 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

Student Learning Outcomes
1. Students will describe concepts, principles, and theories of physical geography.
2. Students will test hypotheses, analyze and interpret data, draw inferences and conclusions, and identify further questions for investigation in this class.
3. Students will recognize the human nature of the scientific enterprise and will evaluate societal issues from a science perspective, question the evidence presented, and make informed judgements about these issues (e.g., climate change of water pollution issues).
4. Students will use the scientific method to carry out experiments.

GEOG 292 Tourism Facilities Management
Organization and structure of supply sector components of the tourism industry, including attractions, lodging, food, visitor services, meeting facilities and their functions of management.
Prereq.: GEOG 290 3 Cr. Fall

Student Learning Outcomes
1. Describe travel and tourism and the industries and organizations that support them.
2. Summarize requirements for the operation of diverse tourism facilities and the management of typical systems within those facilities.
3. Assess the global impacts tourism has on people, places and cultures.
4. Describe future trends in tourism facility design and management.

GEOG 303 Environmental Impact Statements
Preparation and use of environmental impact statements. Topical.
3 Cr. DEMAND

Student Learning Outcomes
1. Recognize diverse environmental impacts of a major federal or state project.
2. Analyze existing projects for possible environmental impacts.
3. Evaluate existing EISes for adequacy and completeness.
4. Prepare EIS-like documents and summarize the main findings to other students in class.

GEOG 316 Geographic Information Systems
Concepts of GIS, including the capture, preprocessing, storage, manipulation, and display of spatial data.
Prereq.: GEOG 216 3 Cr. Fall | Spring

Student Learning Outcomes
1. Explain the nature and use of digital data models.
2. Contrast the differences between coordinate projection systems, as well as apply these principles to GIS Databases.
3. Construct geodatabases through editing operations; particularly those of data capture and conversion.
4. Demonstrate the ability to link nongeographic data to geographically referenced locational data.
5. Relate the concepts of spatial data analysis as applied on both vector and raster datasets.

GEOG 320 The Geography of Wine
Physical and human geographies of wine. How, why and where it is made. Historical changes in production and consumption of wine. Development of local wine industry.
3 Cr. DEMAND

Student Learning Outcomes
1. Students will be able to identify and analyze the main physical geography variables (including weather, climate and microclimate, geology and soils, biogeography) affecting global and local viticultural production.
2. Students will be able to identify and analyze the various human geographies of wine production and consumption on global, national and local scales.
3. Students will be able to describe and explain the geography of wine in Minnesota, including varieties grown, regions wine production is favored, and growth of industry.
4. Students will be able to identify and predict stages in the seasonal cycle of the vine and states of wine making by hemisphere and physical terrain.
5. Students will be able to describe and explain cultural and statistical trends in wine consumption.
6. Students will be able to summarize and evaluate innovations in the global historical geography of viticulture and wine making over the last six millennia, e.g., earliest evidence of wine making in Georgia to Ancient Egyptians and Romans, through the Monastic period of the middle ages to modern

wine production since the European colonial period to current day.
7. Students will be able to analyze the impact of economic and political trends on wine production and consumption locally and globally.
8. Students will be able to compare and contrast wine production and consumption practices of the major world wine regions.

GEOG 325 Soils and Landscapes

Soil properties and classification, characteristics of soil landscapes, and uses of major soil groups.
3 Cr. Odd Fall

Student Learning Outcomes

1. Define basics of soil properties.
2. Explain the principles of soil formation.
3. Categorize the interrelationships between landscape elements and soil properties.
4. Classify and locate the different soil orders throughout the United States.
5. Explain the relationship between soil orders and patterns of land cover/use.

GEOG 335 Land Surveying

Review of surveying. Surveying calculations; traverses, azimuths, areas, horizontal and vertical curves.
3 Cr. Fall

Student Learning Outcomes

1. Apply the principles of trigonometry, plane geometry and coordinate geometry to perform most survey computations.
2. Describe the principles of astronomy for stellar observations and reduction of observations to compute azimuth of traverse line.
3. Compute horizontal, vertical, and spiral curves.
4. Identify and describe the operating geometric principles of surveying instruments.
5. Apply field and office aspects to complete a traverse to meet specified degree of accuracy and compile coordinates of surveyed points.
6. Apply necessary principles to complete a level loop and establish elevations on survey control points.

GEOG 336 Control and Geodetic Surveying

Control Surveys, UTM, SPCS and USPLSS. Deformation and hydrographic surveys. Ground control and photogammetric mapping.
Prereq.: GEOG 335 3 Cr. Spring

Student Learning Outcomes

1. Apply matrix algebra to solve equations.
2. Define and apply control survey principles to design and implement a survey control network.
3. Describe, compute, and illustrate the properties of different mapping projections.
4. Apply the principles relating to different coordinate systems in control surveys.
5. Summarize the procedures in planning/performing a hydrographic survey.
6. Summarize the procedures in planning/performing a deformation survey.
7. Identify the photogrammetric mapping process and perform related calculations such as scale and flight planning.

GEOG 350 Introduction to Remote Sensing

Analysis of photographic images on the earth's landscape to identify objects that reveal spatial relations, and interpreting their significance. Topical.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Distinguish the various models of electromagnetic energy and how they relate to different types of photographic and optical mechanical scanners.
2. Distinguish between different types of camera systems and film types; including their uses in various environmental and cultural interpretations.
3. Explain the basics of photogrammetry, including photo geometry, the effects of displacement and its calculation, and scale calculations, distance and area measurements on imagery.
4. Apply the principles of stereopsis and photo parallax to the demonstration of stereoviewing and height measurement.
5. Assess the principles of object recognition on different types of imagery.
6. Differentiate the different types of nonphotographic sensors such as multispectral scanners, thermal scanners, radar, and lidar.

GEOG 365 UAS and Geospatial Analysis

Basics of small, unmanned aerial systems and how they are integrated into geospatial analysis.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the basics of UAS and how it is applied in remote-sensing imaging techniques.
2. Apply the principles of drone flight to imaging and mapping; especially flight planning, operations, and legal guidelines.

3. Employ the basic techniques of photogrammetry for the creation of georeferenced maps.
4. Implement post processing methods to create digital image mosaics, elevation models, and point clouds from raw UAS imagery.
5. Use image processing techniques to calculate various vegetation and mineral indices for classification and analysis.

GEOG 368 Geography of the Middle East

Geographical analysis of political, economic, and social issues relevant to the Middle East. Regional.
3 Cr. DEMAND

Student Learning Outcomes

1. Identify and assess major physical and human characteristics of the geography of the Middle East, including: i) physical geography and landforms; ii) distribution of population; iii) political divisions, organization and institutions; iv) economic factors; and v) cultural/social features.
2. Research an important historical or contemporary issue/event/process in the Middle East, applying concepts presented in class and/or the course reading materials.

GEOG 369 Geography of East Asia

Physical, historical, cultural, economic, and political geography of East Asia and its component countries of China and Taiwan, Japan, Korea. Regional.
3 Cr. DEMAND

Student Learning Outcomes

1. Identify and assess major physical and human characteristics of the geography of East Asia, including: i) Physical geography and landforms; ii) Distribution of population; iii) Political divisions, organization and institutions; iv) Economic factors; and v) Cultural/social features.
2. Research an important historical or contemporary issue/event/process in East Asia, applying concepts presented in class and/or the course reading materials.
3. Examine the interrelationships among physical and human processes that shape the geographic characteristics of East Asia.

GEOG 372 Conservation of World Resources

Conservation movement and its expression in conservation policies and activities. Supply, use, and management of natural resources, their planned development and use.
3 Cr. Fall | Spring GOAL AREA 10: ENVIRONMENTAL ISSUES

GEOG 373 Geography of Latin America

Geographical analysis of the physical, cultural, economic, and political diversity of the major regions and countries of Latin America. Regional.
3 Cr. DEMAND

Student Learning Outcomes

1. Identify and assess major physical and human characteristics of the geography of Latin America, including: i) physical geography and landforms; ii) distribution of population; iii) political divisions, organization and institutions; iv) economic factors; and v) cultural/social features.
2. Research an important historical or contemporary issue/event/process in Latin America, applying concepts presented in class and/or the course reading materials.

GEOG 374 Geography of Europe

Regional treatment of areas dominated by the European Union. Interpretation of economic conditions. Regional.
3 Cr. Spring

Student Learning Outcomes

1. Identify and assess major physical and human characteristics of the geography of Europe, including: i) physical geography and landforms; ii) distribution of population; iii) political divisions, organization and institutions; iv) economic factors; and v) cultural/social features.
2. Research an important historical or contemporary issue/event/process in Europe, applying concepts presented in class and/or the course reading materials.

GEOG 375 Geography of the United States

Physical, historical, cultural, economic and political geography of the United States. Regional.
3 Cr. DEMAND

Student Learning Outcomes

1. Identify, describe and distinguish the major physical characteristics of the United States (climate, topography and hydrology) 2. Analyze current events (economic, political, cultural) in the United States by applying concepts presented in class and readings.
3. Summarize the major similarities and differences between individual states in the United States.

GEOG 376 Geography of Minnesota

Geography of Minnesota: distribution of surface features, natural resources, climactic differences, crops and human activity. Regional.
3 Cr. DEMAND

Student Learning Outcomes

1. Identify and assess major physical and human characteristics of the geography of Minnesota, including: i) physical geography and landforms; ii) distribution of population; iii) political divisions, organization and institutions; iv) economic factors; and v) cultural/social features.
2. Research an important historical or contemporary issue/event/process in Minnesota, applying concepts presented in class and/or the course reading materials.

GEOG 378 Geography of Russia and Former Soviet Union

Physical and cultural characteristics and relationships of the land and population of Russia and countries of the former Soviet Union. Regional.
3 Cr. DEMAND

GEOG 379 American Wilderness

Perception, delineation, use and analysis of wilderness in the United States.
3 Cr. Spring

Student Learning Outcomes

1. Recognize wilderness as both physical and cultural concept, including history of wilderness movement, philosophy and ethics of wilderness, the wilderness designation process, and current challenges of wilderness management.
2. Explore nature of Minnesota or another state by visiting wild and not-so-wild natural areas.
3. Research a specific topic within the scope of wilderness philosophy, history, ecology, or management.
4. Demonstrate knowledge of survival wilderness travel and +leave no trace+ canoeing and/or backpacking techniques.

GEOG 384 Geography of the British Isles

Distribution of surface features, natural resources and cultural elements of the British Isles. Regional.
3 Cr. Fall

Student Learning Outcomes

1. Identify and assess major physical and human characteristics of the geography of the British Isles, including: i) physical geography and landforms; ii) distribution of population; iii) political divisions, organization and institutions; iv) economic factors; and v) cultural/social features.
2. Research an important historical or contemporary issue/event/process in the British Isles, applying concepts presented in class and/or the course reading materials.

GEOG 390 Geographic Research Design

Geographic research methods; contemporary techniques for data collection, analysis, and presentation. Topical.
Prereq.: GEOG 106 OR GEOG 111; GEOG 216, GEOG 270 OR GEOG 271; GEOG 272 3 Cr. Fall

Student Learning Outcomes

1. Identify and critically assess key concepts in geography.
2. Assess commonly used techniques and field methods for research in geography.
3. Identify and describe an original topic of interest for an undergraduate research project in one of the following areas of geography: i) physical geography; ii) techniques; iii) human-environment interaction; iv) human geography.
4. Locate, summarize, critically appraise, and synthesize appropriate scholarly materials in the preparation of a literature review for an undergraduate research project proposal in their chosen area of study.
5. Identify, describe, justify choice of, execute, and evaluate a relevant method to research questions developed for chosen topic of study.
6. Effectively present overall undergraduate research project proposal orally and in written form.

GEOG 393 Geography of Outdoor Recreation

Perception, use, and management of amenity resources for recreation and tourism on U.S. public lands.
3 Cr. Fall

Student Learning Outcomes

1. Assess the value of geographic resources (physical and cultural) as a catalyst for tourism, and summarize the importance of conservation in protecting these resources.
2. Describe the creation and historical evolution of land management agencies in the United States as it relates to outdoor recreation/tourism.
3. Specify dominant attractions and resources located within individual national parks, forests,

refuges and other public lands.
4. Analyze outdoor recreation locations.

GEOG 394 Urban Planning

Theory, objectives, and methods of the planning process, particularly in the United States.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

Student Learning Outcomes

1. Describe the key forces responsible for urban development in the U.S.
2. Analyze current legal issues in planning.
3. Explain how tools available to the professional planner can use used to achieve desired outcomes.
4. Compare and contrast the major subfields of planning (such as transportation, economic development, environmental, etc.) and discuss their contribution to the development of cities.

GEOG 406 Thematic Cartography

Statistical mapping of spatial data, advanced manual and computer techniques. Topical.
Prereq.: GEOG 316 3 Cr. Fall

Student Learning Outcomes

1. Explain and employ proper map projections, statistics, and basic map elements in their thematic maps.
2. Evaluate quantitative data sources and apply the correct thematic map type that matches the data.
3. Assess and evaluate qualities of thematic maps that make them effective or ineffective.
4. Create thematic maps using modern GIS software.

GEOG 407 Map Design and Presentation

Advanced color desktop computer mapping techniques, such as multimedia and web-based cartography. Topical.
Prereq.: GEOG 406 3 Cr. Spring

Student Learning Outcomes

1. Describe the process of generating a higher-end map product.
2. Design and create a variety of higher-end maps using a modern GIS and high end artistic drawing software.
3. Evaluate raster and vector data sources and correctly apply them to their maps.
4. Develop web delivery systems of maps and generate interactive maps for the web.

GEOG 416 Techniques in GIS

Standard techniques in geographic information systems. Topical.
Prereq.: GEOG 316 3 Cr. Spring

Student Learning Outcomes

1. Practice developing GIS projects using good file management and folder structures.
2. Describe some of the more advanced techniques and be able to integrate multiple techniques in setting up GIS data.
3. Prepare numerous GIS labs and projects using modern GIS software in order to gain proficiency in the field.

GEOG 432 Applied Geography Seminar

Capstone project course for Geography majors. Independent original research culminating in a public presentation and written thesis. Satisfies Upper Writing Division Requirement for GEOG B.A.
Prereq.: GEOG 390 3 Cr. Spring

Student Learning Outcomes

1. Develop effective and original research question(s) in a study in one of the following areas of geography: i) physical geography; ii) techniques; iii) human-environment interaction; iv) human geography 2. Locate, summarize, critically appraise, and synthesize appropriate scholarly materials in the preparation of a literature review in their chosen area of study.
3. Identify, describe, justify choice of, execute, and evaluate a relevant method to research questions developed for chosen topic of study.
4. Present overall research project orally and in written form consistent with UDWR criteria.

GEOG 433 Cadastral Surveying

Descriptions of land, metes and bounds. Easements and right-of-ways. Retracement surveys and proportioning. Witness corners, fences and lost corners. Surveyors liability, Minnesota Regulations.
Prerq,: 336.
Prereq.: GEOG 336 3 Cr. Fall

Student Learning Outcomes

1. Outline the principles of law and its development in the United States.

2.
3. Write and interpret descriptions of land.
4. Evaluate and contrast between single and double proportioning in survey measurements.
5. Identify the responsibilities of the BLM and the

development of the Public Land Surveys.
6. Distinguish the hierarchy of survey evidence.
7. Interpret and compare water boundaries and riparian surveys.
8. Prepare and administer field and office efforts to complete a representative survey.

GEOG 434 Travel/Tourism Seminar

Application of selected travel/tourism concepts. Capstone course. Satisfies Upper Division Writing Requirement in Travel-Tourism B.A.
Prereq.: Completion of travel/tourism core courses and consent of instructor 3 Cr. Fall | Spring

GEOG 435 Boundary Law

Practical understanding of real property boundary and conveyance law as it relates to surveying.
Prereq.: GEOG 433 3 Cr. Spring

Student Learning Outcomes

1. Define and describe types and characteristics of land ownership.
2. Evaluate and explain land ownership transfer.
3. Apply the principles of the 2009 BLM Manual to subdivision of sections and case law.
4. Evaluate (brief) designated court cases and explain the important principles of each.
5. Apply the legal principles from assigned court cases to new situations and examples.

GEOG 436 GPS/GIS Integration

Capstone project class: integration and mastery of GIS techniques and surveying skills.
Prereq.: GEOG 335 3 Cr. Fall | Spring

Student Learning Outcomes

1. Compare and contrast the various positioning systems used in surveying and mapping today and in the future.
2. Outline the relationship of geodesy to GPS surveying.
3. Illustrate, define, and design a GPS survey using project planning topics: positional dilution of precision (PDOP), timeline, multipath, obstructions, and the elevation mask angle.
4. Summarize the different antenna types that are used and their applications.
5. Define and design experiments using the various types of GPS receivers: single and dual frequency, real-time kinematic (RTK), code and phase receivers.

GEOG 438 Geodesy and Survey Adjustments

Geometrical and physical geodesy. Coordinate systems. Gravity and precise leveling. Error propagation, matrix algebra, least squares adjustment. Survey standards and specifications.
Prereq.: GEOG 336, MATH 221, STAT 229 3 Cr. Spring

GEOG 439 Surveying Seminar

Surveying office practice, land records research, contracts, preparation for FLS/LSIT exam. Must be taken in final semester. Satisfies Upper Division Writing Requirement for the B.S. and B.E.S. in Land Surveying.
3 Cr. Spring

GEOG 444 Internship: Practical Geography

Consent of department coordinator of internships required.
Coreq.: 1-12 Cr. DEMAND

Student Learning Outcomes

1. Gain understanding, experience, and professional skills in the field/major/discipline.
2. Practice and enhance presentation, writing, public speaking skills, and other transferable skills.
3. Apply, practice, and refine knowledge in field/major/discipline and its techniques, processes, and skills.
4. Integrate academic knowledge and theory with professional practice.

GEOG 450 Digital Image Processing

Characteristics and qualities of nonconventional remote sensing imagery as it applies to inventory and assessment of environmental phenomena. Topical.
Prereq.: GEOG 350 3 Cr. Spring

Student Learning Outcomes

1. Explain the properties of digital raster imagery.
2. Manipulate repositories and image servers to obtain digital imagery.
3. Prepare digital imagery for display and analysis.
4. Calculate image statistics.
5. Evaluate image statistics for image analysis.
6. Distinguish between different types of image enhancement by using these techniques in the manipulation of imagery.
7. Select methods of digital image classification to discover patterns of land cover on imagery.

GEOG 454 Regional Planning

Comparative regional planning. Economic distribution and ideological differences. Topical.
3 Cr. DEMAND

Student Learning Outcomes
1. Distinguish between the different types of regions utilized for planning purposes.
2. Examine contemporary issues facing regions from the perspective of different socio-economic groups.
3. Formulate contemporary regional economic development proposals.
4. Evaluate alternative regional development plans.

GEOG 455 Urban Site Development
Subdivision design, subdivision requirements and constraints. Government regulations, public hearings, and project management. The plat and subdivision plan. Related calculations and software.
Prereq.: GEOG 335 3 Cr. Spring

Student Learning Outcomes
1. Hypothesize various remedial methods for challenges that occur within the site development process.
2. Investigate the steps involved in obtaining information in storm water management and erosion control.
3. Summarize the steps involved in dealing with other professionals in areas that might include the design of suburban infrastructure components (e.g. sewer lines, roads, and storm drains).
4. Analyze the role of the surveyor in the development process and apply the use of surveying in platting and land development.
5. Design various survey observing methods, techniques, and logistics with regards to the application of site development.

GEOG 462 Concepts in Spatial Analysis
Spatial, network and surface analysis. Topical.
Prereq.: GEOG 416 3 Cr. Fall

Student Learning Outcomes
1. Distinguish between spatial analysis and spatial manipulation.
2. Evaluate alternative spatial statistics and their application.
3. Calculate spatial statistics to discovery patterns in the distribution of geographic phenomena.
4. Identify the extent to which different distributions of spatial data are clustered or dispersed from a random pattern.
5. Employ map algebra in the modeling of data for suitability analysis.

GEOG 471 Historical Geography
Historical-geographical development of North America through concepts of modernity and modernization; imperialism and colonialism; race, class and gender; science and exploration; migration and settlement; industrialization, urbanization, and the modern capitalist state. Topical.
3 Cr. DEMAND

Student Learning Outcomes
1. Define and explain key concepts in historical geography.
2. Synthesize and critically evaluate multiple perspectives on a given event, place or historical-geographical process.
3. Identify and effectively apply primary and secondary sources for historical-geographical research.
4. Critically Interpret a place of local historical significance using a variety of appropriate primary and secondary sources.
5. Critically Interpret an image of national historical-geographical significance using a variety of appropriate primary and secondary sources.

GEOG 472 Geomorphology
The configuration of the earth's surface and physical processes that have brought the surface to its present condition. Topical.
3 Cr. Fall

Student Learning Outcomes
1. Identify and classify various landforms around the world.
2. Practice selected methods of geomorphological research in and out of classroom.
3. Analyze diverse processes and forces that shape the landforms.
4. Assess and summarize research findings pertaining to a specific local landform complex.

GEOG 473 Biogeography
Spatial distribution of species and communities, their relations with the environment, historical changes, and conservation. Topical.
3 Cr. Spring

Student Learning Outcomes
1. Identify and classify diversity of organisms, their communities, and spatio-temporal arrangements of

such (biotas, realms).
2. Practice selected methods of biogeographical research in and out of classroom.
3. Analyze diverse processes and forces that shape world+s biotas and realms.
4. Assess and summarize research findings pertaining to the geographic distribution of a specific group of organisms.
5. Evaluate conservation strategies related to specific organisms.

GEOG 474 Topics in Physical Geography

Selected contemporary issues in physical geography. May be repeated with different subjects to a maximum of 6 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Analyze critically and apply knowledge of the complex, contemporary issues in physical geography, e.g., advanced Quaternary studies in biogeography or modification of natural environments in Minnesota.
2. Apply first-hand experience with contemporary methods of physical geography research, e.g., microscopy of microfossils, creation and interpretation of field vegetation surveys, GIS integration of park resources, or direct field measurements of plant growth.
3. Apply their theoretical knowledge to the construction of synthesis recommendations.

GEOG 476 Topics in GIS

Selected contemporary issues in GIS. May be repeated with different subjects to a maximum of 6 credits.
Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Use Geospatial Software 2. Create and display map and non-map graphics 3. Apply data to real-world GIS applications

GEOG 478 Topics in Human Geography

Selected contemporary issues in human geography. May be repeated with different subjects to a maximum of 6 credits
Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Students will locate and critically evaluate information relevant to the topic 2. Students will be able to read the scholarly literature relevant to the topic 3. Students will be able to apply knowledge to real-world applications

GEOG 486 Political Geography

Geographic concepts applied to the analysis of political organization and behavior.
3 Cr. DEMAND

Student Learning Outcomes
1. Define and explain key concepts in political geography.
2. Synthesize and critically evaluate scholarship in political geography as it relates to specific political and/or geopolitical processes/procedures/events and in its use of specific theoretical perspectives.
3. Summarize and critically evaluate several key texts in political geography at different stages in the development of the sub-discipline.
4. Identify and critically appraise appropriate primary data and/or secondary sources for political geographical research.
5. Critically assess, synthesize and present (orally and/or in written form) research on a specific political-geographical issue or event.

GEOG 492 Water Resources

Major problems in the development and management of water resources: supply, distribution, quality, pollution, floods and variability; case-studies in selected regions.
3 Cr. DEMAND

Student Learning Outcomes
1. Summarize the use, conservation and management of water resources.
2. Explain the legal, economic, political and social factors in water management.
3. Evaluate alternative water management plans.
4. Explain the hydrology of water management.

GEOG 493 Gender, Space and Society: Global Perspectives

Relationships among gender, geography and society at seven key scales--the body, home, workplace, the environment, city, nation and the global.
3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate communication and research skills.
2. Understand and will be familiar with feminist theory.
3. Understand and will be familiar with feminist research methods.

4. Understand the importance of geography to the understanding of society.
5. Explain how gender matters cross-culturally so they will understand importance of gender relations and how gender differ globally; how gender is lived in societies of the Global North and South in the context of development, social change, migration, resource use and work; how gendered lives are brought together geographically through militarism citizenship processes, capitalist economies, discourses ane practices of development, tourism, and environmental use, degradation and protection.

German (GER)

GER 101 Elementary German I
Basic vocabulary and structures to prepare students for developing proficiency in the language. Listening, speaking, reading, writing, and cultural skills building emphasized. Increase understanding and appreciation of culture of countries where language is spoken. Must be taken in sequence. Intended for students with little or no previous study of German. A recommended companion course for students considering a major or minor in German is GER 110.
4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

GER 102 Elementary German II
Basic vocabulary and structures to prepare students for developing proficiency in the language. Listening, speaking, reading, writing, and cultural skills building emphasized. Increase understanding and appreciation of culture of countries where language is spoken. Must be taken in sequence. Intended for students with some previous study of German. A recommended companion course for students considering a major or minor in German is GER 110.
4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

GER 110 Introduction to German Culture
Diverse cultural, historical, and socio-political features of the German cultures. Topics such as the Holocaust, women's issues, and minorities. Recommended companion course to 101 and 102 and can be taken concurrently. For students who want more contact with modern culture. Taught in English.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

GER 201 Intermediate German I
Review and extend the skills of listening, reading, speaking, and writing for purposes of communication. Linquistic and cultural awareness. Prereq.: GER 102, GER 201 4 Cr. Fall GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

GER 202 Intermediate German II
Review and extend the skills of listening, reading, speaking, and writing for purposes of communication. Linguistic and cultural awareness. Prereq.: GER 102, GER 201 4 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

GER 220 Oral and Written Proficiency in German
Practice in speaking and writing skills needed in the second and third year. Required for admission to the major or minor and exit from CPIA. Must be taken before or concurrently with first 300-level course. Prereq.: GER 201, GER 202, GER 301 2 Cr. Fall

Student Learning Outcomes
1. Speak paragraph length discourse in German at the Intermediate level according to the ACTFL (American Council of Teachers of Foreign Languages) proficiency scale.
2. Write paragraph length discourse in German at the Intermediate level according to the ACTFL (American Council of Teachers of Foreign Languages) proficiency scale.
3. Integrate audio and written sources in German into oral and written discourse.

GER 301 Conversation and Composition I
Improves students' ability to create with language. Includes practice in reading, listening, speaking, writing and grammar. Required before any course beyond 302.
3 Cr. Fall

Student Learning Outcomes
1. Read and interpret primary texts in the target language for their general and cultural information.
2. Write narratives and descriptions of a factual nature on familiar topics, consisting of several paragraphs at an Intermediate level of proficiency according to the ACTFL scale.
3. Negotiate language in various formal and informal settings, in partner and groupwork, in speaking and writing.
4. Discuss the target culture in view of global society, and from a variety of perspectives, including

historical, geographical, political, artistic and contemporary viewpoints.
5. Recognize that culture is neither monolithic nor static and that developing insights into the variability of cultural phenomena is a lifelong process.
6. Identify key grammatical structures and apply them to writing of essays and giving presentations with the purpose of information, persuasion, critique.
7. Explore and reflect on cultural aspects as presented by the material: art, civilization, language, history and contemporary culture.

GER 302 Conversation and Composition II

Develops further proficiency in writing and speaking. Course includes practice in reading, listening, speaking, and writing and grammatical competence. Required before any course beyond 302.
3 Cr. Spring

Student Learning Outcomes

1. Analyze primary texts of varying lengths and of different type for their general and cultural information, using both reading and listening skills.
2. Write multi-paragraph narratives, descriptions and argumentations in the target language.
3. Negotiate language in various formal and informal settings, in partner and group work, in speaking and writing.
4. Appraise how both cultural processes and products are important and cultural knowledge and understanding are interdisciplinary.
5. Recognize that different languages use different patterns of interaction and can apply this knowledge to their own culture and culture.
6. Present orally thier own ideas, opinions and critiques of material discussed in class.
7. Identify key grammatical structures and apply them to writing and speaking with a purpose, such as information, persuasion and critique.
8. Engage in discussions with other classmates in the target language by participating in group work, panel discussions, and paired work.

GER 320 Introduction to German Literature

Reading strategies for German lyric poetry to popular prose and drama, literature of women. Vietnamese, Turkish, and other ethnic minorities in Germany.
3 Cr. DEMAND

Student Learning Outcomes

1. Describe works that embody behaviors, values and perspectives unfamiliar to the student.
2. Interpret texts through sensitivity to vocabulary and language, tone, imagery and point of view.
3. Interpret texts through sociohistorical contexts, including the experiences of ethnic and social minorities in German-speaking countries.
4. Analyze a broad range of literature and literary genres in the German tradition.
5. Compare and contrast the different forms, types and kind of German literary genres.
6. Demonstrate an awareness of authorial intention and the perspectives of authors as they relate to their literary products.
7. Define basic literary terms and apply them to the study of selected works of literature.

GER 321 Fine Arts Abroad

For students participating in the study abroad program in Ingolstadt. Classroom preparation and field trips to museums, music, theatre, and reading performances as part of the Ingolstadt curriculum. Taught by the program director in collaboration with on-site support staff. Course can be repeated once while abroad.
3 Cr. Spring

Student Learning Outcomes

1. Interpret cultural artifacts as they reflect a people's values and traditions.
2. Compare their own cultural perspectives and values in relation to German-speaking culture(s).
3. Explain cultural artifacts and behaviors in relation to the socio-historical contexts of German-speaking countries.
4. Analyze works that embody values, behaviors and perspectives of German-speaking culture(s).
5. Collaborate with classmates on exploratory projects to deepen their understanding various aspects of values, behaviors and perspectives of German-speaking culture(s) .
6. Write a reaction paper to the cultural event and describe how it reflects cultural values.

GER 322 Urban History and Development Abroad

For students participating in the study abroad program in Ingolstadt. Classroom preparation and field trips to local sites in Bavaria, Brandenburg, Berlin, and other parts of Germany, Austria, and Switzerland, budget permitting. Visits to businesses, local governments, and media. Taught by the program director in collaboration with on-site

support staff. Course can be repeated once while abroad.
3 Cr. Spring

Student Learning Outcomes
1. Relate their cultural knowledge from the classroom to the sites visited during the sttudy abroad program.
2. Analyze social, cultural and economic issues of the target culture as observed and experienced in site visits and in service learning projects in the community.
3. Compare and contrast social, cultural and economic issues in the target culture and the United States.
4. Compare and contrast the various regional social, cultural and ecomomic issues in German speaking countries to explore issues of federalism in target culture.
5. explain issues of intercultural competence in journals and final reflection paper.

GER 323 Cultural Life and Traditions Abroad
For students participating in the study abroad program in Ingolstadt. Classroom preparation and field trips to local events in Bavaria that demonstrates the culture and lore of the region. Events will include theater and dance performances, concert, and literary events. Taught by the program director in collaboration with on-site support staff. Course can be repeated once while abroad.
3 Cr. Spring

Student Learning Outcomes
1. Describe and examine cultural artifacts and traditions of target culture.
2. "Illustrate how regional character of the study abroad site differs from and intersects with the notion of ""German"" culture. " 3. Analyze issues of diversity in German-speaking countries as represented in cultural values and products.
4. Reflect on and describe interactions with target culture in a way that demonstrates intercultural competence and understanding.
5. Compare varied aspects of German culture to other cultures in the world.

GER 324 German Women Writers
Study and analysis of texts by German women writers from a socio-historical perspective.
Prereq.: GER 301 3 Cr. DEMAND

Student Learning Outcomes
1. Discuss and describe works by women writers that embody behaviors, values and perspectives as they pertain to the varied experiences and perspectives of female authors.
2. Analyze texts by German women writers from a socio-historical perspective.
3. Interpret texts of German-speaking women writers throuh sensitivity to vocabulary, language, tone, imagery and point of view.
4. Identify and describe a broad range of literature by women writers as it reflects the varied experiences and perspectives of the authors.
5. Apply interdisciplinary knowledge to the literature of women writers writing in German.
6. Comprehend, interpret and evaluate literature in German through reading, writing, and discussions.
7. Infer that literature and texts are affected by age, geographic region, sex, class and other factors and that multiple perspectives, value systems and modes of decision-making and behaviors exist.

GER 325 German Film
Study and analysis of German cinema from the literary, social, technical, and theoretical perspectives.
Prereq.: GER 301 3 Cr. DEMAND

Student Learning Outcomes
1. Analyze the cultural values and traditions represented in German film.
2. Identify and describe the historical, geographical, artisitic and contemporary viewpoints of various standard works of German cinema.
3. Interpret the cultural content of films in German in discussions and writing.
4. Analyze the development of German cinema through technical and theoretical readings.
5. Compare medium of film with other mediums of representation, such as literature and art.

GER 326 Literature in Translation
Study of aspects of German literature in translation from Middle High German period to the present. This course will apply to a major program only if no course outside the German program is used to complete program.
3 Cr. DEMAND

Student Learning Outcomes
1. Identify a broad range of literature and literary genres in the German tradition.
2. Explain the major periods of German literary

history.
3. Interpret texts through sensitivity to vocabulary and language, tone, stylistic devices, imagery and point of view.
4. Analyze important authors in German-speaking literature in their sociohistorical context.
5. Describe and critique works that embody behaviors, values and perspectives unfamiliar to the student.

GER 341 Cultural History

Introductory studies in the history, culture, geography and civilization of German-speaking countries.
Prereq.: GER 302 Coreq.: GER 301 3 Cr.

Student Learning Outcomes

1. Apply knowledge of intercultural competence in experiential-learning situations.
2. Analyze the relationship between culture and language use.
3. Interpret cultural artifacts, behaviors, products and values as they represent German-speaking culture/s.
4. Identify and describe the similarities and differences of common traits between their own and the target culture.
5. Investigate, evaluate, and apply sources of information in research on target culture.
6. Articulate differences and similarities between target language cultures and cultures in the United States.
7. Know about cultural stereotyping and how to address it as a result of developing skills inprocessing information which include observing, comparing, and inquiring about cultural phenomena; analyzing and hypothesizing about the phenomena, and synthesizing and determining their generalizability
8. Have opportunities for first-hand experience with the target cultures, whether in the United States or abroad, and relate those experiences to the classroom setting.

GER 411 Advanced Studies in German Literature

Study of particular German-speaking author of specific topics in German or German-American literature.
Prereq.: GER 302 3 Cr. DEMAND

Student Learning Outcomes

1. Write arguments and expositions showing their understanding of a piece of literature.
2. Analyze literature with demonstrated awareness of genre, audience and situation.
3. Interpret the motifs and themes of a piece of literature.
4. Relate an individual piece of literature to the overall literary traditions in German-speaking countries.
5. Apply methods, terms, and theories related to literary studies.

GER 418 Ethnic and Social Minorities in German-Speaking Countries

Study of ethnic minorities in German speaking countries.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze the target culture/s from a variety of social and ethnic minority perspectives.
2. Identify and describe cultural institutions, practices and products and evaluate why current conditions exist.
3. Observe, compare and inquire about cultural phenomena and assess their cultural generalizability to understand cultural stereotyping.
4. Analyze how cultural phenomena are affected by and affect age, sex, class and ethnicity, etc.
5. Analyze issues of intercultural conflict and competence in various media.

GER 421 Advanced Studies in German Civilization

Intensive study of a particular aspect of the historical, sociological, artistic, political or intellectual development of the German-speaking peoples as announced in advance.
Prereq.: GER 302 3 Cr. DEMAND

Student Learning Outcomes

1. Describe and analyze historical, sociological, artistic, political or intellectual products, values and patterns of German-speaking countries.
2. Interpret and evaluate cultural information in the target language in a way that demonstrates awareness and understanding of that culture's values and traditions.
3. Describe and analyze one particular aspect of the historical, sociological, artistic, political or intellectual development of the German-speaking peoples.
4. Identify and describe the cultural richness and diversity of the countries where German is spoken.
5. Reflect on and compare cultural differences when approaching social values.

GER 422 Urban History and Development Abroad

For students participating in the study abroad program in Ingolstadt. Classroom preparation and field trips to local sites in Bavaria, Brandenburg, Berlin, and other parts of Germany, Austria, and Switzerland budget permitting. Visits to businesses, local governments, and media. Taught by the program director in collaboration with on-site support staff. Course can be repeated once while abroad.
3 Cr. Spring

Student Learning Outcomes

1. Relate cultural knowledge from the classroom to the sites in the community during the study abroad program.
2. Analyze social, cultural and economic issues of the target culture as observed and experienced in site visits and in service learning projects in the community.
3. Compare and contrast social, cultural and economic issues in the target culture and the United States.
4. Compare and contrast the various regional social, cultural and economic issues in German speaking countries to explore issues of federalism in target culture.
5. Explain issues of intercultural competence in journals and final reflection paper.

GER 423 Cultural Life and Traditions Abroad

For students participating in the study abroad program in Ingolstadt. Classroom preparation and field trips to local events in Bavaria that demonstrates the culture and lore of the region. Events will include theater and dance performances, concepts, and literary events. Taught by the program director in collaboration with one-site support staff. Course can be repeated once while abroad.
3 Cr. Spring

Student Learning Outcomes

1. Describe and examine cultural artifacts and traditions of target culture.
2. "Illustrate how regional character of the study abroad site differs from and intersects with the notion of ""German"" culture. " 3. Analyze issues of diversity in German-speaking countries as represented in cultural values and products.
4. Describe and demonstrate intercultural competence in their reflection on interactions with target culture.
5. Analyze social causes and effects of diverse cultural practices in German-speaking countries.

GER 444 Internship

Use linguistic ability in work setting in the US or in the host country. Combines learning with apprenticeship experience.
Prereq.: Permission of instructor/advisor. Coreq.: 2-4 Cr. DEMAND

GER 450 Applied Linguistics in German

Introductory contrastive analysis of German and English phonological and grammatical features. Understanding and appreciation of the subtleties of written and spoken German.
Prereq.: ENGL 361 (B.S. majors only), GER 302 3 Cr. Spring

Student Learning Outcomes

1. Analyze and compare German and English phonological and grammatical features.
2. Interpret and describe advanced grammar skills through contextual analysis.
3. Describe how sound patterns work and analyze phonological data in the study of phonetics and phonology.
4. Identify and describe correct pronunciation patterns and evaluate pronunciation inconsistencies.
5. Transcribe speech samples phonetically.

GER 454 Teaching German in the Secondary School

Taken concurrently with student teaching. Application of language learning principles in secondary schools. Selection and presentation of daily and unit lessons. Critique based on the theories discussed in FORL 453. BS capstone course. Cannot be used as an elective in BA program.
Prereq.: FORL 453, FORL 553 2 Cr. Fall | Spring

Student Learning Outcomes

1. Evaluate sample lesson plans appropriate for secondary school.
2. Develop meaningful lesson plans for field experience, showing linguistic and inter/cultural knowledge.
3. Reflect on skills and linguistic abilities required to complete tasks relevant to teaching assignments.
4. Discuss and describe teaching experience with teaching supervisor and academic advisor while on duty.
5. Develop a professional portfolio at the end of clinical experience, including own materials,

observation by supervisor, colleagues and academic supervisor.

GER 456 Teaching German in the Elementary School

Application of language learning principles to elementary school instruction.
Development/selection of materials and practice in presenting them. BS capstone course; cannot be used as an elective in BA program.
Prereq.: FORL 455-555 2 Cr. DEMAND

Student Learning Outcomes

1. Produce and evaluate sample lesson plans appropriate for elementary school instruction.
2. Describe and apply Second Language Acquisition theory and practice in creation of lesson plans.
3. Reflect on skills required to complete tasks relevant to the teaching assignments.
4. Develop meaningful lesson plans that incorporate and demonstrate linguistic proficiency and cultural awareness.
5. Compile documents for a teaching portfolio with class observations, teaching evaluations, use of own pedagogical materials at the end of clinical experience.

GER 457 Senior Project (BA)

Research-based thesis on selected topics in German literature, linguistics, or culture under the guidance of instructor. Capstone course in transition to graduate studies or to a career. Taken during last academic year of undergraduate studies.
2 Cr. Fall | Spring

Student Learning Outcomes

1. Identify, describe and analyze (a) cultural, social or literary issue/s pertaining to the culture in German-speaking countries in a 10 to 15 page research paper that demonstrate at least Intermediate-High level of written proficiency according to the ACTFL scale.
2. Interpret and summarize information and develop perspectives through the use of authentic literature and materials from the German-speaking world.
3. Formulate a thesis pertaining to (a) cultural, social issue/s or topics in German-speaking countries and compare and contrast various perspectives of the issue or topic.
4. Evaluate and interpret information pertaining to (a) cultural, social issue/s in German-speaking countries.
5. Evaluate their own language with regard to grammar, stylistics and pragmatics, and accurately communicate the interrelationships of language and culture and understand that cultural knowledge and understanding are interdisciplinary.

GER 460 Study Abroad

Required capstone course for participants in study abroad program. Requires study abroad during a semester, a thesis and public presentation of arguments made in the thesis. Topics determined in consultation with study abroad director.
3 Cr. Spring

Student Learning Outcomes

1. Engage in community sites and observe and describe the cultural and social environment in the host country.
2. Respond critically to works of cultural artifacts and products.
3. Investigate, interpret and describe social, historical and cultural values, products and behaviors experienced and/or observed while engaging in small group projects during the experience abroad.
4. Describe and analyze cultural experiences in reflective journals.
5. Design and compile a portfolio that represents and describes especially formative cultural and linguistic experiences during education abroad.

GER 461 Internship

Use of linguistic ability in a work setting in the U.S. or in a German-speaking country. Combines learning with an internship experience. Completion of an internship report under guidance of instructor. May substitute for 457.
2 Cr. DEMAND

Student Learning Outcomes

1. Negotiate and engage with activities within the settings of the workplace in German-speaking contexts in US or in a German-speaking countries with an acceptable level of German linguistic proficiency.
2. Compile and organize a professional portfolio with all relevant aspects of the experience.
3. Reflect on and describe the skills required to complete tasks relevant to the position, keep a journal of experience and a portfolio of evaluation by supervisors.
4. Engage in and negotiate the activities that occur within the settings of the workplace in German-

speaking contexts in US or in a German-speaking countries in a way that demonstrate intercultural competence and awareness.
5. Summarize, describe and evaluate improvement in cultural and linguistic proficiency as a result of the internship.

GER 471 Business German

Legal system; business administration; job market; banking, manufacturing, and service industries; real estate.
Prereq.: GER 302 Coreq.: 2-4 Cr. DEMAND

Student Learning Outcomes

1. Write routine business correspondences.
2. Comprehend, interpret and evaluate information related to German and global business practices in the target language.
3. Compare and contrast business practices and products as they relate to German-speaking and American cultures, as well as the global context.
4. Analyze cultural artifacts as they pertain to business practices to explore German business customs.

Gerontology (GERO)

GERO 208 Introduction to Gerontology (Diversity)

Exploration of the processes of aging; introduction to issues of aging in contemporary society. A core course for the gerontology minor.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

GERO 405 Aging and Diversity (Diversity)

The intersection of factors such as gender, race, ethnicity, culture, class, sexual orientation, geographic location, physical ability with aging.
3 Cr. Fall GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

GERO 411 Aging Policy and Programs

The federal, state and local framework of services and programs for the aging.
3 Cr. Fall

Student Learning Outcomes

1. Demonstrate a knowledge of the range of services and programs for older adults.
2. Identify the support systems in place at the federal, state and local leves for programs and services for older adults.
3. Evaluate the aging netowrk and policies, legislature and guidelines that govern programs, services and entittlements.
4. Identify and evaluate issues, policy and program implementation by agencies and organizations.
5. Demonstrate a knowledge of the role that policy has on the lives of older adults and the larger community.

GERO 415 Women and Aging (Diversity)

Position of older women in society and issues that are unique to women as they age.
3 Cr. Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

GERO 425 Dementia and Aging

The nature, causes and treatment of dementia in later life, including concerns for family, caregiving and community practice.
3 Cr. Fall

Student Learning Outcomes

1. Identify the range of illnesses causing dementia, their symptoms and their currently known causes and treatments.
2. Identify potential conditions that may mimic symptoms of dementia, but are not caused by a dementia producing illness.
3. Demonstrate an understanding of the processes for diagnosing dementia, as well as the medical, ethical, and social chanllenges associated with diagnosis.
4. Locate, crticically evaluate and assimilate new information regarding dementia (e.g., causes, treatments) as it becomes available.
5. Identify and utitlize information and strategies for working with persons with dementia and their families (e.g., communication skills, behavioral approaches, information referral, care alternatives, ethical and legal concerns.

GERO 430 Elder Law

Issues facing advocates and their clients regarding elder law. Elder rights and public policy and the role of society.
3 Cr. DEMAND

GERO 435 Housing, Transportation & Aging

Housing and transportation needs of older persons and housing options available to them. Issues of working with older persons in a variety of housing settings.
3 Cr. Spring

Student Learning Outcomes
1. Identify, compare and contrast housing options for older adults with regard to the diverse housing needs of older adults in the U.S.
2. Evaluate the social, psychological, physical, historical and economic contexts of housing for older adults in the U.S.
3. Identify the primary local and national policies and programs associated with housing for older adults.
4. Identify and critique the theoretical and pratical implications of physical housing design.
5. Identify and apply key elements of Universal Design.
6. Evaluate current challenges faced by senior housing professionals.

GERO 440 Seminar
Analysis of issues or topics in the field of aging. A specific topic will be selected each time the course is offered. May be repeated.
Coreq.: 1-3 Cr. DEMAND

GERO 444 Internship
Supervised field experience in an agency, program, business or institution working with or on behalf of older adults. Arranged by contract between site supervisor, faculty supervisor and student.
Coreq.: 3-12 Cr. Fall | Spring

Student Learning Outcomes
1. Identify key aspects of individual internship experiences as they relate to specific gerontology program core concepts.
2. Identify aging workplace challenges and reflect on how to address them.
3. Identify positive aging workplace skills and reflect on how to enhance them.
4. Evaluate the ethical and professional challenges of working with an older population.
5. Demonstrate professional workplace behavior.

GERO 465 Health and Aging
Physiological and cognitive processes of human aging within context of environmental, societal and lifestyle factors which promote healthy aging.
Prereq.: GERO 208 or permission of instructor. 3 Cr. Spring

Student Learning Outcomes
1. Demonstrate a basic understanding of the health needs of older adults.
2. Distinguish between normal, pathological, usual and successful aging.
3. Demonstrate a knowledge of key biological theories of aging.
4. Identify physiological changes associated with aging.
5. Identify environmental, social and lifestyle factors that affect the health of older adults.
6. Evaluate strategies for maintaining and improving health over the life course.

GERO 470 Global Aging (Diversity)
Aging as a global phenomenon. Demographic trends, historical influences and lived experience. Focus on intersection of gender, ethnicity, geography, and class.
3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

Global Studies (GLST)

GLST 195 Global Society and Citizenship
Understanding the development of global society through exploration of the concepts and practices of civic engagement and global citizenship.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES | GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

GLST 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

GLST 495 Senior Seminar in Global Studies
Integrative examination of core concepts in global studies culminating in a research project. This course fulfills the upper division writing requirement.
Prereq.: GLST 195, ANTH 250, HIST 106 (global), POL 353 3 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze critically the relevant theories on international and global issues.
2. Evaluate core concepts in global studies.
3. Analyze qualitative and quantitative information on international and global issues.
4. Communicate orally and in writing about specific international and global issues.

Health (HLTH)

HLTH 125 Fundamentals of Health

Development of acceptable health information and practices including personal and community health for the present and future of the student and her/his family.
2 Cr. DEMAND

Student Learning Outcomes

1. Review current health information and practices related to personal and community health.
2. Categorize the basic concepts, issues, and terminology of personal and community health.
3. Explain the significance of the concept of wellness as it applies to the individual, community and the population as a whole.
4. Create a personal or community health plan which applies central concepts of the course.

HLTH 210 Principles of Nutrition

Overview of basic principles of nutrition. Applied nutrition, selection of an adequate diet, dietary standards, tables of food composition, and dietary problems.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

Student Learning Outcomes

1. Analyze the role of nutrients in the body.
2. Appraise how nutrition affects health.
3. Determine the ways food conveys emotional satisfaction, hormonal stimuli, and cultural preferences.
4. Evaluate clinical applications of nutrition for the prevention of cardiovascular disease, cancer, diabetes, vitamin deficiencies, and other chronic illnesses.
5. Estimate dietary reference intakes and daily values.
6. Explain principles of food safety and food technology.
7. Compute nutritional assessments using diet analysis software.

HLTH 215 Personal and Community Health

Exploration of personal and community problems in selected emotional, social, physical, intellectual areas.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

Student Learning Outcomes

1. Summarize the basic concepts, issues, and terminology of personal and community health.
2. Examine the significance of wellness as it applies to the individual, community, and population as a whole.
3. Identify and discuss the importance of the community to solve or remediate major health issues faces by society.
4. Appraise major sources of health information and critically evaluate the accuracy, quality and reliability of health data.
5. Investigate the health-related activities of the various governmental, private and voluntary agencies.
6. Assess health care availability, cost, and delivery in the United States.
7. Develop a plan for change or enhancement of a current wellness concept and create behavior change goals and objectives.

HLTH 220 Public Health

Roles and functions of public health. Relationships between psychological, environmental, social, biological, and behavioral determinants of health.
3 Cr. DEMAND

Student Learning Outcomes

1. Define and evaluate the philosophic constructs that constitute the field of public health that will assist the public health practitioner (or professional) in his/her practice.
2. Describe how historical events have influenced the development of the field of public health.
3. Identify the purpose of public health practice.
4. Appraise the scientific literature that provides the foundation for public health practice.
5. Define public health and describe the roles and responsibilities of public health agencies at the local, state, and federal levels.
6. Using the definition of public health, describe the roles and responsibilities of non-governmental organizations, foundations and public health institutes.

HLTH 225 Theory and Foundation of Community Health

Health behavior theories and models used in planning, implementing, and evaluating community-based initiatives and personal health behaviors.
3 Cr. DEMAND

Student Learning Outcomes

1. Distinguish the theoretical bases and models for health promotion and education.
2. Evaluate theories in public health education and

community health.
3. Design theory-based public health education and health behavior assessment tools.
4. Analyze settings and target audiences for health education and health promotion.
5. Synthesize health behavior theory and planning models for intervention/implementation.
6. Contrast culturally appropriate, theory-driven individual and community-based behavior change interventions.
7. Evaluate the history of the health education/community health profession and its current and future implications for professional practice.
8. Assess research and literature applying health behavior theory and planning models within existing health promotion programs.
9. Appraise appropriate qualitative and quantitative research methods.

HLTH 250 Consumer Health

Exploration of consumer health issues: types, cost, and availability of health care, products, and services; health quackery, fads, and consumer protection.
3 Cr. Fall GOAL AREA 2: CRITICAL REASONING

Student Learning Outcomes

1. Identify the applications of the field of consumer health to everyday life situations.
2. Review the major sources of misleading information, quackery and health fraud encountered by consumers of health products and services.
3. Critically appraise health information provided by radio, T.V., print sources, the Internet and similar sources of information.
4. Distinguish facts from fiction and apply the scientific method to interpretation of facts.
5. Distinguish the different techniques and tools used by the advertisement industry to sell their products and increase profit.
6. Examine the importance of what is known as science-based health care when choosing a physician, seeking basic medical, or surgical care.
7. Examine how specific programs and services work in the field of mental health, dental care, and alternative healing.
8. Review the major elements of self-care and when to use the health care facilities.

HLTH 255 Women's Health Issues

Study of historical and current health issues affecting women.
3 Cr. DEMAND

Student Learning Outcomes

1. Review the current research in women's health in the U.S. and the rest of the world.
2. Identify health-enhancing behaviors that reduce women's health risks.
3. Identify both short-term and long-term consequences of positive and negative health choices in the life of women.
4. Write a personal goal-setting and decision making plan.

HLTH 301 Health Issues and Strategies for Teachers

Contemporary health issues affecting the performance of school children. Problem identification, teaching techniques, resource opportunities, referral services, and collaboration. Must be admitted to Teacher Education to enroll.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Demonstrate knowledge of basic concepts, issues, and strategies through quizzes, exams, and assignments of health and wellness issues.
2. Demonstrate teacher sensitivity towards students' cultural differences in attitudes, beliefs, and health practices.
3. Identify and discuss current problem areas in health that affect student performance.
4. Identify and implement several teaching strategies for teaching health issues.
5. Design and implement a health lesson on an assigned topic using media and interactive techniques.
6. Become familiar with using professional periodicals, educational websites and the internet as resources for assignments and research.
7. Identify substance use, misuse, and abuse issues.
8. Analyze how drug issues affect themselves, their families, and the community.

HLTH 325 Public Health

Roles and functions of public health. Relationships between psychological, environmental, social, biological, and behavioral determinants of health.
Prereq.: HLTH 215, HLTH 225 3 Cr. DEMAND

Student Learning Outcomes

1. Evaluate public health as a system with inputs, processes, outputs, and results, including core functions and essential public health services.
2. Assess health status trends for the United States.
3. Specify prevention interventions directed toward health and illness and their connection to levels of care in the United States.
4. Compare administrative law processes carried out by public health agencies.
5. Specify national and international public health organizations and resources.
6. Determine strategies to enhance the infrastructure of public health.
7. Explain the role of public health professionals in emergency preparedness and response.
8. Classify major steps in planning, implementation, and evaluating a public health program.

HLTH 350 International Health

Health problems, issues, practices, and programs of international scope and significance.
3 Cr. DEMAND

Student Learning Outcomes

1. Evaluate emerging international health practices and programs.
2. Identify and analyze a current international health issue (both print and online) and conduct research for content area.
3. Apply methods, techniques, or processes to a project.

HLTH 402 CONCUSSIONS IN STUDENT ATHLETES

0 Cr.

HLTH 405 Drugs in Society

Health effects of drug use, abuse and dependency. Psychological, physiological and sociological effects of drugs. Policies, laws, prevention programs and community resources.
2 Cr. DEMAND

Student Learning Outcomes

1. Research drug abuse prevention programs and resources of various governmental, private, and voluntary agencies.
2. Describe the immediate and long-term physiological and psychological effects of controlled substance use, misuse, and abuse.
3. Determine specific actions that can be taken by individuals, communities, and schools to reduce, prevent, and treat the abuse of substances.

HLTH 411 Nutrition: Older Adult

Nutritional status and needs of the older adult. Common nutritional problems of the elderly. Overview of the programs designed to serve the health and nutrition needs of the older adult.
Prereq.: HLTH 210 3 Cr. DEMAND

HLTH 412 Advanced Nutrition

Current topics in nutrition, relationship of nutrition to physical performance; methods of nutritional assessment; and complex nutrient needs.
Prereq.: HLTH 210 3 Cr. DEMAND

Student Learning Outcomes

1. Describe the scientific method and different research methodologies.
2. Describe the cell: microcosm of life.
3. Describe the digestive system and its relation with nutrition.
4. Describe the structural/functional characteristics of carbohydrates, fats, proteins, vitamins, and minerals.
5. Describe the oxidative and phosphorylation process.
6. Describe the metabolic pathways for carbohydrates, fats, proteins, and vitamins.
7. Describe the importance of macro/micro minerals and water for the normal functioning of the body.
8. Provide clinical applications of the metabolic process of nutrients and minerals in the body.
9. Describe the impact of proper nutrition on exercise, sport, and body composition.

HLTH 425 Community Health Event Planning

Planning, organizing and delivering community health events. Career development for community health.
Prereq.: HLTH 484 (484 can be taken concurrently) 2 Cr. Fall | Spring

Student Learning Outcomes

1. Prepare resume and cover letter, analyze job market, practice interview skills.
2. Analyze advocacy strategies for community health problems.
3. Organize efforts to address common community health issues.
4. Collaborate with health agencies outside the university setting.
5. Write business correspondence to solicit funds,

seek advertising and donations, and reserve facilities to conduct health education programs.
6. Conduct outreach activities in the community.
7. Develop group communication skills and apply them in a practical setting.
8. Recommend health programming using social media.
9. Evaluate self, peer and program evaluations.
10. Engage in service learning.

HLTH 430 Seminar: Topical

Discussion, literature search, research in selected, contemporary topics-developments in community health, health education, and safety such as AIDS, chemical abuse, consumerism, environmentalism, accidents, and health care delivery. May be repeated topically.
Coreq.: 1-3 Cr. Fall | Spring

HLTH 444 Internship, General

Arranged by contract with field supervisor, college supervisor and student. Should be established semester previous to experience. Credits awarded are determined by clock hours involved.
Coreq.: 1-12 Cr. Fall | Spring | Summer

HLTH 446 Internship, Community Health

Educationally focused placement in an approved community health setting. Arranged and approved the semester prior to the internship.
Prereq.: 2.5 GPA overall and in major, evident of current CPR [infant, child, adult], First Aid and AED certifications. 6 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Integrate knowledge, theory, and understanding of community health coursework and apply it to the internship placement.
2. Use competencies as a community health professional.
3. Reflect on theories and concepts as related to their on-the-job experience to improve their performances as professionals.

HLTH 475 Epidemiology

Patterns of health and disease in populations and connections with beneficial and adverse behaviors and exposures. Analysis of the frequency and distribution of illness and disability among and within populations.
Prereq.: Majors only or permission of instructor, STAT 239 or SOC 304 3 Cr. DEMAND

Student Learning Outcomes

1. Define epidemiology, what epidemiologists do in their field and list the purposes and uses of epidemiology.
2. Define the concepts of incidence and prevalence.
3. Define and provide examples that illustrate the concepts of epidemics and outbreaks at the national and international level.
4. Describe the epidemiology triangle, and the disease concepts of transmission, modes, and the chain of infection.
5. Differentiate between the major elements of communicable disease prevention and control, including; environment, host, quarantine, infection control, and preventive measures at the national and international level.

HLTH 481 Human Sexuality

Biological, psychological, behavioral, and cultural aspects of sexuality.
3 Cr. DEMAND

Student Learning Outcomes

1. Identify and describe the male and female sexual organs and genitalia.
2. Summarize the social, behavioral, psychological and physical aspects of gender roles in culture.
3. Classify the elements of reproductive health, including types of birth control, their effectiveness and responsible choices regarding their use.
4. Describe the male and female response (physical, psychological and social) to sexual stimulation.
5. Identify and discuss the etiology, symptoms and signs of Sexually Transmitted Infections (STI), and discuss treatments, prevention, and the impact of STI's on the population today.

HLTH 482 Environmental Health

Physical, chemical, and biological agents of environment contamination. Body's reaction to environmental and occupational pollutants; policy decisions; emerging global environmental health problems.
Prereq.: HLTH 210 and HLTH 325 3 Cr. DEMAND
GOAL AREA 10: ENVIRONMENTAL ISSUES

Student Learning Outcomes

1. Describe the root causes of the environmental crisis and solutions.
2. Analyze the effect of excessive human growth population and its impact in the environment and how to stabilize the human population using the sustainability strategies.

3. Reveal the foundations of a sustainable energy system and creating sustainable cities, suburbs, and towns applying the principle and practices of sustainable community development.
4. Identify the perils of accelerated pollution and resource depletion as well as the importance of creating sustainable solutions to prevent water pollution, misuse of pesticides, hazardous and solid wastes.

HLTH 484 Health Promotion

Develop and implement health promotion and behavioral science interventions, use varied strategies for target audiences.
Prereq.: HLTH 325 3 Cr. DEMAND

Student Learning Outcomes

1. Identify basic theories, concepts and models from a range of social and behavioral disciplines that are used in public health research and practice.
2. Analyze settings and target audiences for health education and health promotion.
3. Conduct needs assessment and plan health promotion programs.
4. Plan, implement and evaluate health promotion programs, policies and interventions.
5. Assess community collaborations required to successfully deliver a health promotion intervention.
6. Develop a professional philosophy of health promotion/education.
7. Identify strategies that incorporate multicultural competence within health promotion initiatives.

Herberger Business School (HBS)

HBS 111 Orientation to the Herberger Business College

Programs and policies, career and program options, preparation for academic success, and orientation to student life in the Herberger Business School. (Should be taken as early as possible in the student's program.)
1 Cr. Fall | Spring

HBS 211 Career Essentials

Business career paths, job application materials (print and web), interview strategies, opportunities in study abroad, internships, leadership, and community engagement.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Devise a career strategy by identifying career options for their major.
2. Identify opportunities that build a strong resume -- study abroad, internships, community engagement, student organizations.
3. Practice interview skills.
4. Practice meeting employers and working professionals and apply interview etiquette principles.
5. Apply job application skills to their employment search.

HBS 327 Observations and Reflections of the European Business Environment

Provide a method for students to study, observe and reflect upon various aspects of conducting business in the European market. Taught in Ingolstadt, Germany.
3 Cr. Fall | Spring

HBS 411 Workplace Etiquette and Professionalism

Soft skills required to succeed in professional careers in business; workplace etiquette, interpersonal communication, leadership and avenues for professional development.
1 Cr. Fall | Spring

HBS 479 Special Topics in Global Business

Special topics in the global business environment. May include information systems, marketing, management, accounting, finance, law, and related topics. May be repeated up to 6 credits with different topics.
3 Cr. DEMAND

Health and Physical Education (HPE)

HPE 200 Movement I

Explores rhythmic activities, spatial elements, and individual skills. Permission required.
3 Cr. Fall | Spring

HPE 207 Movement II

Movement analysis and correction, specialized skills, and team building.
Prereq.: HPE 200 3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze skill performance in a multitude of activities.
2. Utilize basic research to interpret psychomotor

skills.
3. Explain the role of basic anatomy and the role of the muscular system on skill performance.
4. Identify the physics involved with human movement in a multitude of skills.
5. Identify the changes in human movement behavior relative to lifespan, growth, maturation, environment and psychology.
6. Describe strategies utilized in game or competitive situations.
7. Identify the factors that affect skill performance (fatigue, learning, environment, disabilities, personality, motivation, maturation, social factors). BOT 3B3.
8. Develop skill expertise in a variety of individual, dual, and team activities. BOT 3A2.
9. Identify and interpret etiquette in a variety of sports along with rules applicable to officiating. BOT 3B6.
10. Utilize appropriate instructional cues and prompts for basic motor skills and physical activity. BOT 3A3.

HPE 295 Foundations of HPE

Historical, psycho-social and philosophical foundations of health and physical education.
3 Cr. Fall

Student Learning Outcomes

1. Analyze and embed criteria for various disciplines in Health/Physical Education.
2. Contrast the sociological, political, historical, and technological influences on the Health, Physical Education teaching profession.
3. Evaluate the critical use of reading comprehension strategies and describe their impact on K-12 Health/Physical Education.
4. Develop, identify, and use appropriate critical content vocabulary applicable to the profession.
5. Differentiate professional ethical standards and codes of behavior from unethical behaviors.
6. Identify influential health/ physical educators and their contribution to the body of knowledge.
7. Compare and contrast major philosophies prevalent during selected historical periods, both in the United States and world-wide.
8. Create personal philosophies for Health Education and Physical Education, which includes Physical Education teaching, health promotion and concepts and strategies related to physical activity and fitness.
9. Identify selected professional organizations and advantages of memberships.
10. Identify various career opportunities for professionals with a degree in health, physical education, exercise and sport.

HPE 298 Contemporary Health and Wellness Issues

Health promotion, communicable and non communicable diseases, personal and cultural health habits, consumerism, safety, environmental health, goals and decision making skills and techniques.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify behaviors and factors that prevent or reduce the risk of accidents, sudden illness, and violent injuries 2. Explain the concepts related to health promotion and disease prevention including: a. behaviors that foster and those that hinder well-being b. physical, social, emotional, and intellectual factors that influence health 3. Explain the concepts of primary, secondary, and tertiary prevention
4. Explain how to access valid health information and health-promoting products and services including: a. selecting and evaluating the validity of sources of health education information b. identifying and accessing appropriate and cost-effective school and community health services c. identifying access valid health information and health-promoting products and services about communicable and non-communicable diseases d. identifying and evaluating appropriate lifestyle assessments and health-risk appraisals 5. Identify health-enhancing behaviors that reduce health risks including: a. the short-term and long-term consequences of positive and negative health choices b. the relationship between and among the major health determinants of genetics, environments, health care, and personal behavior c. the importance of individual responsibility for health d. the importance of individual responsibility for health e. strategies to reduce and prevent stress-related health problems 6. Explain the effects of advertising, media, technology, and social norms on health behaviors.
7. Explain how to use goal-setting and decision-making skills to enhance health including: a. age appropriate decision-making and goal-setting models b. applying decision-making and goal-setting processes to personal health choices c. applying decision-making and goal-setting processes to personal health choices as related to disease prevention 8. Apply of basic concepts, issues, and terminology of personal and community health.
9. Critically evaluate major sources of health sources

of health information based on the accuracy, quality, and reliability of health data.
10. Compare and contrast the health related activities of several of governmental, private, and voluntary agencies, and assess heath care availability, cost, and delivery in this country.

HPE 310 Nutrition and Implications of a Healthy Diet

Overview of the basic principles of nutrition and its influence upon the heart, chronic diseases and fitness.
3 Cr. Fall

Student Learning Outcomes

1. Examine how to access valid health information and health-promoting products and services.
2. Identifying and evaluate appropriate lifestyle assessments and health-risk appraisals.
3. Identify and evaluate behaviors and factors that contribute to sufficient physical activity and promote health enhancing dietary practices.
4. Identify and apply concepts related to health promotion and disease prevention including behavior that foster and those than hinder well being.
5. Evaluate the relationship between and among the major health determinants of genetics, environments, health care, and personal behavior including - but not limited to: The relationship between and among genetic health determinants as applied to various diseases. The relationship between and among environmental health determinants as applied to various diseases. The relationship between and among accessible, affordable, and available health care as applied to various diseases. The relationship between and among personal health behavior as applied to various diseases.
6. Identify and apply the short-term and long-term consequence of positive and negative health choices.
7. Identify and apply the importance of individual responsibility for health.
8. Evaluate the effects of advertising, media, technology and social norms on nutrition and activity.
9. Identify and apply how to use goal-setting and decision-making skills to enhance healthy food choices in relation to disease prevention including: a. The components of and processes for the development and implementation of personal health plans. b. Applying decision-making and goal-setting processes to personal health choices. c. The components of and processes for the development and implementation of personal health plans.

HPE 320 Drugs and Mental Health

Use, abuse and misuse of mood modifying substances, drug history, regulations, classifications, effects, treatment, and prevention strategies. Mental health issues, methods to better personal health behaviors. Complies with requirements of M.S.A. 126.05.3
3 Cr. Spring

Student Learning Outcomes

1. Understand behaviors and factors that prevent or reduce the risk of tobacco use or alcohol and other drug abuse.
2. The student will understands health-enhancing behaviors that reduce health risks including: a) Analyzing the short-term and long-term consequences of positive and negative health choices. b) Appraising the importance of individual responsibility for health.
3. Understand strategies to reduce and prevent stress-related health problems.
4. Understand the effects of advertising, media, technology, and social norms on health behaviors.
5. Understand how to use goal-setting and decision-making skills to enhance health including: a) Age appropriate decision-making and goal-setting models. b) Applying decision-making and goal-setting processes to personal health choices.

HPE 375 Methods of K-12 in PE

Course offers "in-depth" study and application of effective teaching and learning in the Physical Education classroom.
Prereq.: HPE 207 Coreq.: HPE 376 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply NASPE Content Standards for physical education in planning.
2. Design & implement appropriate motor experiences for pK-12 learner.
3. Develop philosophy of teaching for elementary and secondary teaching.
4. Develop objectives for lesson plans that are tied to standards.
5. Understand & use various teaching styles & strategies.
6. Construct practical assessments & feedback.
7. Design appropriate instructional materials to enhance learning.

8. Apply teaching cues effectively.
9. Formulate reflections based on teaching performances.

HPE 376 Field Experience in Physical Education: Grades PreK-12

Practical experience in regular physical education settings, grades PreK-12. Minimum number of hours is 30.
Coreq.: HPE 375 1 Cr. Fall | Spring

Student Learning Outcomes

1. Design & implement appropriate movement experiences for pK-12 Learners.
2. Observe, assist, and analyze teaching of pK-12 students in public school settings.
3. Design lesson plans & teaching materials for a variety of physical education levels.
4. Develop techniques for preventive and corrective classroom management & discipline.
5. Effectively use standards and teaching cues in planning & teaching.
6. Communicate instructional information through a variety of formats.

HPE 407 Advanced Fitness and Conditioning

Basic principles and functions of the human body with applied fundamentals of fitness and wellness as they relate to behavior, physiological function and physical activity. Majors only.
Prereq.: HPE 310 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify instructional practices, approaches, and methods and match materials, both print and digital, to the cognitive levels of all readers, guided by an evidence-based rationale, which support the developmental, cultural, and linguistic differences of readers.
2. Examine Chronic diseases as influenced by behavior, environment, society, and nutrition.
3. Analyze and synthesize concepts related to health promotion including behaviors that foster and those that hinder well-being.
4. Analyze and synthesize concepts related to disease prevention including behaviors that foster and those that hinder well-being.
5. Analyze and synthesize health-enhancing behaviors that reduce health risks including: a. The importance of individual responsibility for health; b. Strategies to reduce and prevent stress-related health problems.
6. Analyze and synthesize how to use goal-setting and decision-making skills to enhance health including: a. The components of and processes for the development and implementation of personal health plans. b. Applying decision-making and goal-setting processes to personal health choices. c. The components of and processes for the development and implementation of personal health plans.
7. Analyze and synthesize benefits and implications of, and how to, promote lifelong physical recreation.
8. Identify developmentally appropriate health enhancing physical fitness activities for PK-12 students.
9. Describe the fitness physical education curriculum model and analyze its usefulness in the PK-12 curriculum.
10. Analyze and synthesize, through application, skills necessary to perform varied physical activities including: a. Conditioning exercises. b. Strength training.

HPE 420 Sexuality, Relationships and Human Development throughout the Lifecycle

Body growth and development, reproduction and heredity. Personal relationships, dating, sexual orientation, courtship, marriage and family living. Life cycle through maturity as it relates to health and physical education. Majors only.
3 Cr. Spring

Student Learning Outcomes

1. Identify and apply short-term and long-term consequences of positive and negative health choices faced by individuals involved in any relationship.
2. Identify and apply the development of healthy relationships.
3. Identify and apply the importance of individual responsibility for health.
4. Identify and apply age appropriate decision-making and goal-setting models that can be used for relationship building.
5. Identify and apply applying decision-making and goal-setting processes to personal relationship choices.
6. Identify and apply the immediate and long-term impact of health decision on the individual, family, and community.
7. Analyze and synthesize sexuality and human development issues and concepts: a) Distinguish between gender and sex. b) Describe the human reproductive process. c) Describe the physiology and function of the hormones that affect male and female sexuality. d) Identify and apply the

psychological, emotional and social responses associated with menstruation and menopause. e) Identify strategies to prevent or reduce the risk of HIV infection and AIDS, sexually transmitted diseases, and unintentional pregnancy.
8. Identify and apply factors influencing the developmental life cycle: a) Explain healthy nutrition habits and the importance in maintaining these habits throughout a life-time. b) Explain healthy fitness habits and the importance in maintaining these habits throughout a lifetime. c) Explain healthy wellness and health care habits and the importance in maintaining these habits throughout a lifetime.
9. Continued from above: d) Explain drug use and abuse and the importance in maintaining healthy decision making skills throughout a lifetime. e) Differentiate between grief and loss and explain the stages associated with each. f) Identify family and community resources.

HPE 434 Organization and Administration of Health/Physical Education Pre-K-12

History; legal basis; curriculum; school health services and program; emotional climate of school; emergency care; evaluating results of health instruction; role of physical education in health. Program planning, curriculum development, methods of presentation in grades Pre K-12. This course meets the upper division writing requirements. Majors only.
3 Cr. Spring

Student Learning Outcomes

1. Articulate the importance of physical education, health education and current practices, and trends in the secondary school curriculum.
2. Interpret scope of elementary school physical education curriculum.
3. Analyze models of a secondary health and physical education programs.
4. Analyze a comprehensive school health programs.
5. Analyze a comprehensive elementary school physical education program.
6. Understand the concepts of legal liability and negligence.
7. Devise and analyze lesson plans in secondary HPE.
8. Understand the relationship between intramurals, sport clubs and special events.
9. Demonstrate understanding of leadership and management styles.
10. Analyze district HPE plansthat links mission to goals/objectives in comprehensive program plans.

HPE 438 Methods of 5-12 Health

Study and application of effective teaching and learning in the Health Education classroom.
Prereq.: HPE 310, HPE 320, HPE 375, HPE 420 Coreq.: HPE 439 3 Cr. Fall | Spring

Student Learning Outcomes

1. Understands behaviors and factors that: Prevent or reduce the risk of HIV infection and AIDS, sexually transmitted diseases, and unintentional pregnancy.
2. Analysis and synthesize through application the concepts related to health promotion and disease prevention including: a) The need for and role of a philosophy of health, health education, and health promotion. b) Components of comprehensive school health programs and interrelationships among components. c) Behaviors that foster and those that hinder well-being.
3. Understands how to access valid health information and health-promoting products and services including: a) Using or developing appropriate data gathering instruments to include national, state, or district level morbidity, mortality, behavioral risk, and needs assessment data. b) Articulating research and public policy regarding health issues.
4. Analyze how to use interpersonal communication skills to enhance health including: a) Models and strategies for teaching communication skills for expressing needs, wants, and feelings; communicating, care, consideration, and respect of self and others; conflict resolution; and refusal skills. b) Strategies for facilitating dialogue related to controversial health issues.
5. Analyze and synthesize through application on how to use goal-setting and decision-making skills to enhance health including: a) Age appropriate decision-making and goal-setting models.
6. Analyze and synthesize through application the teaching of health that integrates understanding of health with the understanding of pedagogy, students, learning, classroom management, and professional development including: a) Educational principles relevant to the physical, social, emotional, moral, and cognitive development of preadolescents and adolescents. b) Research base for and the best practices of middle and high school education.

HPE 439 Field Experience in Health Education

Practical experience in regular health education settings, grades PreK through 12. Minimum number of hours is 30.
Coreq.: HPE 438 1 Cr. Fall | Spring

Student Learning Outcomes

1. Apply the standards of effective practice in teaching students through a variety of early and ongoing clinical experiences with middle level and high school students within a range of educational programming models.
2. Demonstrates an understanding of the teaching of health that integrates understanding of health with the understanding of pedagogy, students, learning, classroom management, and professional development.

HPE 447 Assessment Strategies in Health and Physical Education

Tools and techniques for assessing learning and performance of children in health and physical education.
Prereq.: HPE 207, HPE 310, PESS 300 3 Cr. Fall

Student Learning Outcomes

1. Apply a variety of assessment techniques when assessing children in the health and physical education domains.
2. Synthesize the differences between the various types of assessment techniques and the appropriate use of each.
3. Identify and apply basic measurement and statistical terminology.
4. Analyze the relationship of assessment to curriculum development and instruction.
5. Through practical application demonstrate the value of using a variety of technological devices, computer technology and software programs in assessing and evaluating students in health and physical education.
6. Analyze the differences between and among the terms: 'grading', 'evaluating', and 'assessing'.
7. Compare/contrasts the various methods of computing grades for children in health and physical education.
8. Examine grading philosophies that integrate assessment designs and developmentally appropriate teaching strategies.
9. Apply and evaluate the differences between the six levels of Bloom's of Taxonomy of Educational Disciplines: knowledge, comprehension, application, analysis, synthesis, and evaluation.
10. Evaluate the variables that may interfere with assessing performance abilities of children, such as examiner influences, the assessment tool itself, physical, cognitive, social, or emotional factors of students, as well the environment, just to name a few.

HPE 457 Senior Seminar: Health/Physical Education Teacher Education

Trends and issues affecting teaching health and physical education in today's ever-changing society. Majors only.
Coreq.: HPE 458, ED 421, ED 431 2 Cr. Fall | Spring

Student Learning Outcomes

1. Planning 1.Using knowledge of students to inform Teaching and Learning. 2.Planning for developing competencies and knowledge in HPE. 3.Planning Assessments to monitor and support student learning and differences.
2. Assessment 1.Demonstrate alignment between objectives, instruction, and assessment of skills. 2.Plan for a variety of ways to provide student performance feedback.
3. Academic Language 1. Identify instructional practices, approaches, and methods and match materials, both print and digital to cognitive levels of all readers, guided by an evidenced-based rationale, which support the developmental, cultural, and linguistic differences of readers.
2. Plan for continuous assessment and feedback of reading progress, providing potential interventions and communication of progress.

HPE 458 Integration of Theory into Practice: Field Experience in HPE

Pedagogical practice in a K-12 setting, including Education Teacher Performance Assessment (EdTPA).
Prereq.: Admittance to major, HPE 375, HPE 376, HPE 438, HPE 439 Coreq.: HPE 457 2 Cr. Fall | Spring

Student Learning Outcomes

1. Apply information from assessment tools in each domain for informed instruction.
2. Apply principles of a safe and effective teaching environment.
3. Create instructional strategies that deepen student learning through responses, connections, and prior learning.
4. Apply feedback in learning opportunities to include skill development, assessment, literacy.

HPE 467 Student Teaching for Health and Physical Education

Supervised teaching for Health and Physical Education Teacher Education students, leading to 5-12 Health Education and Pre K-12 Physical Education licensure.
6 Cr. Fall | Spring

Student Learning Outcomes

1. Subject Matter: a. Candidate applies the central concepts, tools of inquiry and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students. b. Candidate knows and applies discipline-specific and theoretical concepts critical to the development of a physically educated person.
2. Student Learning: a. Candidate develops and provides learning opportunities for children and supports their intellectual, social and personal development. b. Candidate utilizes assessments and reflection to foster student learning and inform instructional decisions.
3. Diverse Learners: a. Candidate uses the knowledge of how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.
4. Instructional Strategies: a. Candidate understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving and performance skills. b. Candidates utilize assessments and reflection to foster student learning and inform instructional decisions.
5. Learning Environment: a. Candidate uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning and self-motivation.
6. Communication: a. Candidate uses knowledge of effective verbal, nonverbal and media communication techniques to foster active inquiry, collaboration and supportive interaction in the classroom.
7. Planning Instruction: a. Candidate plans instruction based upon knowledge of subject matter, students, the community and curriculum goals. b. Candidate plans and implements a variety of developmentally appropriate, learning experiences and content aligned with local, state, and national standards to develop physically educated individuals.
8. Assessment: a. Candidate understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.
9. Reflection and Professional Development: a. Candidate is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
10. Partnerships: a. Candidate fosters relationships with school colleagues, parents and agencies in the larger community to support students' learning and well-being.

History (HIST)

HIST 101 Studies in World History

An interpretive study of general trends and selected topics in various periods and subjects that are cross-cultural, national, and regional in scope. May be repeated with different instructor and subject but not for general education purposes.
3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

HIST 105 Studies in U.S. History

An interpretive study of general trends and selected topics in social, cultural, political, and economic history. May be repeated with different instructor and subject but not for general education purposes.
3 Cr. DEMAND

Student Learning Outcomes

1. Describe or use the methods and data by which historians investigate human conditions. As fundamental courses in history, these versions of HIST 105 have a pervasive engagement with SLO 1, exploring both historical methods and data, such as statistical analysis of census records, analytical evaluation of primary sources, both personal and public.
2. Analyze human behavior, culture, and social institutions and processes from the perspective of history. Each version of HIST 105 is focused on human behavior, cultures, and social institutions & processes as seen from the perspective of history. Students will read and analyze primary documents dealing with varied cultural groups who migrated or were brought to the continent.
3. Develop explanations for and explore solutions to historical or contemporary social problems Through a series of regular writing assignments, students develop explanations for, and explore solutions to, historical social problems such as racism, economic inequality, sexism, and agism, to name a few.
4. Reflect upon themselves in relation to family, communities, society, culture and/or their histories. Reading primary accounts and writing about them will help students come to understand their own histories, while understanding the wide variety of cultural, linquistic, and ethnic identities that make

up the United States in the past and the present.
5. Apply and critique alternative explanatory systems or theories about human societies and behavior. Students will read the work of historians whose interpretations of events varies, both in time and space, understanding that historians can differ in their historical arguments and theories. Students will demonstrate their understanding of varied historigraphical arguments by writing analytical essays and participating in in-class or on-line discussions.

HIST 106 Historical Studies (Diversity)

Studies in multicultural, women and minority history suitable for the MGM and/or general education requirement. May be repeated with different instructor and subject.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

HIST 109 Race in America (Diversity/RIS)

The roots of racism and the manifestations of white supremacy and racial discrimination in a particular period of U.S. history.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

HIST 110 Western Civilization I: Antiquity to 1500

Evolution of Western civilization from the ancient Mediterranean world to the 1500s.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

HIST 111 Western Civilization II: 1500-Present

Evolution of Western civilization from the Reformation to the present.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

HIST 135 Aspects of Medieval English Society

Study of English society in the Middle Ages (approx. 1066-1485) making specific reference to the rich heritage of this period to be found in Northumbria. Course offered at Alnwick U.K. International Studies Program only.
2 Cr. DEMAND

Student Learning Outcomes
1. Describe or use the methods and data by which historians investigate human conditions. Students are encouraged through lectures and the study of texts and source material to understand that historians operate by rules of evidence. Emphasis is placed on the necessity to approach the evidence in an objective, empathetic and constructively critical way. Students are expected in tests and written assignments to answer questions on the content and context of a variety of historical sources, artefacts, written and pictorial sources.
2. Analyze human behavior, culture, and social institutions and processes from the perspective of history. Lectures and site visits encourage students understanding of aspects of medieval English society and the art and architecture which were products of the social, political and belief systems of the period. Students are required to produce a project based on their research and field studies.
3. Develop explanations for and explore solutions to historical or contemporary social problems. Students are encouraged to understand and make connections between historical and contemporary problems relating to the human condition. Students are expected orally and in writing to recognize the historical rootedness of contemporary problems.
4. Reflect upon themselves in relation to family, communities, society, culture and/or their histories. Bringing students to an understanding of the fact that the present has been shaped by what has gone before encourages students to reflect on themselves in the historical context. Orally and in writing they are expected to reflect on the historical evolution of the British culture, society and political system to which they are themselves exposed as participants in the British Studies Programme.
5. Apply and critique alternative explanatory systems or theories about human societies and behavior. Students are encouraged in interactive lectures and through historiographical analysis to be aware of different approaches to, interpretations of and opinions about past events and personalities. Students are expected to read texts and articles which expose them to this aspect of historical scholarship and demonstrate their understanding where relevant in written assignments.

HIST 140 America to 1865

Interpretations of general trends and topics from pre-European contact American Indian civilizations through the Civil War.

3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

HIST 141 United States Since 1865 (Diversity)

Interpretations of general trends and topics from reconstruction into the recent era.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

HIST 150 Twentieth Century World (Diversity)

Analysis of major themes in 20th century world history, including revolution and social change, national liberation, global conflict, the western world, global economy and rise of the Pacific area.
3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

HIST 195 Democratic Citizenship

Exploration through history of the concept and practice of democratic citizenship from an intellectual, political, social, cultural, economic, and multicultural perspective from the year 1500 to present.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

HIST 235 Britain in the Tudor Era

Politics, personality and religion in Early Modern Britain. Course offered at Alnwick U.K. International Studies Program only.
2 Cr. Summer

Student Learning Outcomes

1. Describe or use the methods and data by which historians investigate human conditions. Students are encouraged through lectures and the study of texts and source material to understand that historians operate by rules of evidence. Emphasis is placed on the necessity to approach the evidence in an objective, empathetic and constructively critical way. Students are expected in tests and written assignments to answer questions on the content and context of a variety of historical sources, artefacts, written and pictorial sources.
2. Analyze human behavior, culture, and social institutions and processes from the perspective of history. Current historical thinking on the Tudor age and its wider cultural context is presented through lectures, audio visual material and the use of documents. Students are required to show their understanding and grasp of this through examinations which require both factual recall and an ability to communicate in fluent and well-constructed written exercises.
3. Develop explanations for and explore solutions to historical or contemporary social problems Students are encouraged to understand and make connections between historical and contemporary problems relating to the human condition. Students are expected orally and in writing to recognize the historical rootedness of contemporary problems.
4. Reflect upon themselves in relation to family, communities, society, culture and/or their histories. Bringing students to an understanding of the fact that the present has been shaped by what has gone before encourages students to reflect on themselves in the historical context. Orally and in writing they are expected to reflect on the historical evolution of the British culture, society and political system to which they are themselves exposed as participants in the British Studies Programme.
5. Apply and critique alternative explanatory systems or theories about human societies and behavior. Students are encouraged in interactive lectures and through historiographical analysis to be aware of different approaches to, interpretations of and opinions about past events and personalities. Students are expected to read texts and articles which expose them to this aspect of historical scholarship and demonstrate their understanding where relevant in written assignments.

HIST 291 Approaches to History

Introduction to the discipline and its professional application. Historiography, secondary source analysis, and historical context and thinking.
Prereq.: HIST 106 or HIST 109 or HIST 110 or HIST 111 or HIST 140 or HIST 141 Coreq.: Cr. Spring

Student Learning Outcomes

1. Explain historical methods 2. Summarize historiography 3. Employ historical methods in oral and or written forms 4. Differentiate historical methods 5. Construct historiographical analysis
6. Appraise comparative historical methods

HIST 320 Global History of Drinking

Examination of the production, consumption, and regulation of alcohol in world history.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, identify and analyze the principles of historiography and its limitations related to the study of alcohol consumption.
2. In a manner suitable for an upper division level course, identify and read primary sources that show how alcohol production and consumption has shaped human relationships around the globe in regards to religion, economics, human health, and environmental concerns.
3. In a manner suitable for an upper division level course, analyze historiographical interpretations of the history of alcohol regulation, consumption, and production in a global context.
4. In a manner suitable for an upper division level course, correctly utilize important analytical categories; such as gender, race, class, and age as a way to interpret and explain the history of alcohol in a global context.

HIST 330 Europe in Revolution 1789-1914

Political, cultural and social revolution in Europe with particular emphasis on Germany and France.
3 Cr. Odd Fall

Student Learning Outcomes

1. In a manner suitable for an upper division level course, critically analyze problems of nineteenth-century European history, including revolutionary change.
2. In a manner suitable for an upper division level course, identify a work's thesis on European history and compare competing historical interpretations.
3. In a manner suitable for an upper division level course, integrate ideas and evidence about nineteenth-century Europe into a wider global context.
4. In a manner suitable for an upper division level course, improve analytical skills through class discussion and written essays.

HIST 334 Crisis of the European Mind

European thinkers and cultural ideas from the Enlightenment to postmodernism.
3 Cr. DEMAND

Student Learning Outcomes

1. Assess the intellectual debates about the existence of universal reason, and how they have informed arguments in European history about civic rights.
2. Interpret and argue the merits of philosophical ideas from leading scholars and scientists of Europe.
3. Evaluate European thinkers who debated the defense of reason, objectivity, imagination and emotions in their historical contexts.
4. Analyze arguments made by leading European thinkers about the nature of modern cultural values in their social settings.

HIST 335 Reformation to Revolution: Early Modern Britain 1529-1689

Politics, personalities and religion in Early Modern Britain, 1529-1689. Course offered at Alnwick U.K. International Studies Program only.
4 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, describe or use the methods and data by which historians investigate human conditions during the Early Modern period in Britain.
2. In a manner suitable for an upper division level course, analyze human behavior, culture, and social institutions and processes in Britain from 1529-1689 from the perspective of history.
3. In a manner suitable for an upper division level course, develop explanations for and explore solutions to historical social problems in Britain's early modern period.
4. In a manner suitable for an upper division level course, reflect upon the history of Britain in relation to family, communities, society, culture and/or their own personal histories.
5. In a manner suitable for an upper division level course, apply and critique alternative explanatory systems or theories about human societies and behavior to the study of Early Modern Britain.

HIST 337 Modern Britain

British history, 1717 to present. Development of the modern parliamentary system; old empires and new; industrial society and the modern world. Course offered at Alnwick program only.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, describe or use the methods and data by which historians investigate human conditions in Britain from the 18th to the 21st century.
2. In a manner suitable for an upper division level course, analyze human behavior, culture, and social institutions and processes in Britain from 1717 to the present from the perspective of history.

3. In a manner suitable for an upper division level course, develop explanations for and explore solutions to historical social problems in the most recent periods in Britain's past.
4. In a manner suitable for an upper division level course, reflect upon the history of Britain in relation to family, communities, society, culture and/or their own personal histories.
5. In a manner suitable for an upper division level course, apply and critique alternative explanatory systems or theories about human societies and behavior to the study of Modern Britain.

HIST 345 American Economic

Colonial times to present; transformation from an agricultural to an industrial economy.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, analyze causes of economic growth and why growth fluctuates or varies over time.
2. In a manner suitable for an upper division level course, distinguish regional differences within the nation in terms of major industries, cultural, religious and other social characteristics, and political ramifications of those differences.
3. In a manner suitable for an upper division level course, appraise the economic causes and consequences of major events such as the Revolutionary War, Louisiana Purchase, War of 1812, Civil War, WW1, New Deal, WW2, VietNam War, and other major political and social phenomena.
4. In a manner suitable for an upper division level course, evaluate the nation's progression from a land intensive agrarian economy to a capital intensification manufacturing economy to a knowledge intensive service economy and the impact of this progression on social structures and governmental policies.
5. In a manner suitable for an upper division level course, measure and criticize fluctuations in output (Gross Domestic Product), unemployment, and prices.

HIST 346 Minnesota

Survey of Minnesota history with emphasis on interpreting the state's experience within a larger context. Indians, explorers, early settlements, state-making, agriculture, industry, transportation, politics.
3 Cr. Odd Spring

Student Learning Outcomes

1. In a manner suitable for an upper-division course, read and analyze primary and secondary sources pertaining to the culture, politics, and society of the Minnesota region from first contact between Native people and Europeans through statehood and the Civil War.
2. In a manner suitable for an upper-division course, examine and articulate themes and examples of the development and subsequent demise of a bicultural society, and the creation of racial hierarchies.
3. In a manner suitable for an upper-division course, write and present to the class a well-structured critical book review on an aspect of Minnesota history.
4. In a manner suitable for an upper-division course, conduct historical research and craft an essay on a topic in Minnesota history, utilizing both primary and secondary sources.

HIST 349 Americans and Nature

The interaction of Americans with their natural environment from early settlement into the twentieth century.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division course, identify, read, and analyze a broad range of primary and secondary sources pertaining to American environmental history.
2. In a manner suitable for an upper division course, explore and recognize varied interpretations, approaches, and types of sources related the broader historiography of American environmental history.
3. In a manner suitable for an upper division course, examine how past civilizations have interacted with and shaped the natural world, explore the shifting attitudes of Americans toward nature during different historical eras, trace varied federal and regional environmental policies in the United States, and consider how contemporary Americans have chosen to perceive and interact within varied ecosystems of the nation.
4. In a manner suitable for an upper-division course, conduct historical research on a particular region of the country with a focus on how residents perceive and interact with the ecosystems of the region, environmental policies that have influenced that region, and develop a deeper understanding of historical scholarship that explores the natural world.

HIST 350 African American History

African background, Western racism, slave systems, beginning of black institutions, black nationalism and protest, civil rights movements.
3 Cr. Spring

Student Learning Outcomes

1. In a manner suitable for an upper-division course, evaluate the historical, geographical, cultural, social, political and economic development of Africans and their descendants in North America; beginning with the slavery practices in Africa, the development of slavery in America, the development of African American culture and community, struggles to overcome slavery, life in the generations following the abolition of slavery, and the struggle for civil rights and social equality.
2. In a manner suitable for an upper-division course, evaluation of the various historiographical interpretations of slavery, free black communities, racial identity, and African American endeavors for equality.
3. In a manner suitable for an upper-division course, write well-structured essays that examine significant themes in African American history.
4. In a manner suitable for an upper-division course, read and demonstrate understanding of a wide range of both primary and secondary materials regarding African American history.

HIST 352 American Indian History (Diversity)

Tribal societies in North America, from earliest times to the present, tribal histories and cultures, intercultural relations, federal Indian policies and tribal responses, and American Indians today.
3 Cr. Fall GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

Student Learning Outcomes

1. In a manner suitable for an upper-division course, read and analyze primary and secondary sources pertaining to significant individuals, events, and developments related to American Indian history and varied tribal histories.
2. In a manner suitable for an upper-division course, examine and articulate themes and examples of the complicated nature of intercultural relations between American Indians and non-Indians, varied dimensions of federal Indian policy, tribal and American Indian resistance, tribal adaptations and cultural persistence, and intra-tribal and intertribal diversity.
3. In a manner suitable for an upper-division course, write well-structured essays that examine significant themes in American Indian history.
4. In a manner suitable for an upper-division course, explore how American Indian peoples and communities relate to, diverge from, and contribute to narratives of American history.
5. In a manner suitable for an upper-division course, conduct historical research on a particular American Indian tribe, critically examine perspectives of distinct sources pertaining to that tribe or community, and develop a deeper understanding of historical and ethno-historical scholarship.

HIST 354 Mexican-Americans

Spanish and Indian backgrounds in Mexico; primary emphasis upon Mexican-Americans in the U.S. since 1848.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, through discussion and written argument, evaluate the historic, geographic, cultural, social, political and economic development of the Mexican-American (Chicana/o) people from their roots in greater Mexico before European contact, through the forging of a mestizo culture in New Spain and Mexico, and through multiple waves of annexation and immigration into, and migration within the United States of America.
2. In a manner suitable for an upper division level course, compare the developments of the different waves and sociocultural groups of Mexican-Americans over time, and highlight change over time through discussion and written argument.
3. In a manner suitable for an upper division level course, analyze historical study and inquiry through critical reading of secondary sources, primary documents (in English translation where necessary), discussion, and written argument about historical perspectives and historical questions.

HIST 356 Women in History

Study of women's roles in shaping societies and cultures of the past and their struggle to achieve equality with men.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, identify, read, and analyze primary and secondary sources.

2. In a manner suitable for an upper division level course, explore and explain feminist interpretations of women's history in the North America, Latin America, Asia, Europe, Africa, the South Pacific, and/or the World.
3. In a manner suitable for an upper division level course, reinterpret the history of these regions by weaving women into the web of the past.
4. In a manner suitable for an upper division level course, apply historical methods to the study of an individual woman or group of women.

HIST 357 Multicultural US Women's History

History of women in the United States from pre-European contact to the present, emphasis on cross-cultural comparisons of women of color and minorities.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, identify, read, and analyze primary and secondary sources.
2. In a manner suitable for an upper division level course, explore and explain feminist interpretations of women's history in the United States from a multicultural perspective.
3. In a manner suitable for an upper division level course, compare life experiences of indigenous women, European women, African women, women of color, immigrant women, from various eras in U.S. history from pre-contact to the present.
4. In a manner suitable for an upper division level course, reinterpret the history of the United States by weaving women of color into the web of the past.
5. In a manner suitable for an upper division level course, apply historical methods to the study of an individual woman or group of women.
6. In a manner suitable for an upper division level course, interpret the meaning of a past that incorporates women into it for the present and future of the United States.

HIST 358 Immigration, Race, and Ethnicity (Diversity)

Why people migrated, evolution of the concept of race, growing distinctions between race and ethnicity, intercultural relations, nativism and acceptance, areas of settlement, contribution to American society, problems faced within the U.S.
3 Cr. Even Fall GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

Student Learning Outcomes

1. In a manner suitable for an upper-division course, through discussion and written argument, evaluate the historic, geographic, cultural, social, political and economic development of migrants to the United States from colonization through the twentieth century.
2. In a manner suitable for an upper-division course, identify recurring patterns and differences among various ethnicities and racial groups over time through discussion and written argument.
3. In a manner suitable for an upper-division course, analyze historical study and inquiry through critical reading of secondary sources, primary documents, and personal accounts.
4. In a manner suitable for an upper-division course, perform research on family history and write an analytical account that integrates the individual story into the larger context of immigration history.

HIST 361 Latin America, 1492-1825

Spanish and Portuguese colonial empires in America from their origins through the wars of independence.
3 Cr. Fall

Student Learning Outcomes

1. In a manner suitable for an upper division level course, evaluate the historic, geographic, cultural, social, political and economic developments of Latin American civilizations and cultures from before European contact until 1825 CE through discussion and written argument.
2. In a manner suitable for an upper division level course, compare the developments in the different regions, colonies and empires over time and highlight change over time through discussion and written argument.
3. In a manner suitable for an upper division level course, analyze historical study and inquiry through critical reading of secondary sources, primary documents in English translation, discussion, and written argument about historical perspectives and historical questions.

HIST 362 Latin America Since 1825

Development of the major Latin American countries since the wars of independence.
3 Cr. Spring

Student Learning Outcomes

1. In a manner suitable for an upper division level course, evaluate the historic, cultural, geographic,

social, political and economic developments of Latin America from 1825 CE to the present through discussion and written argument.
2. In a manner suitable for an upper division level course, compare the developments in the different regions and countries of Latin America over time and highlight change over time through discussion and written argument.
3. In a manner suitable for an upper division level course, analyze historical study and inquiry through critical reading of secondary sources, primary documents in English translation, discussion, and written argument about historical perspectives and historical questions.

HIST 365 Traditional Asia

A broad survey of Asian history to about 1600 A.D., focusing primarily on cultural and intellectual history of India, China, Japan, Korea, and Southeast Asia.
3 Cr. Fall

Student Learning Outcomes

1. In a manner suitable for an upper division level course, evaluate the historical, geographical, social, political and economic developments of Asian civilizations and cultures (Central Asia, South Asia, East Asia, Southeast Asia) from the Neolithic until the 1600s CE through discussion and written argument.
2. In a manner suitable for an upper division level course, compare the developments in the different civilizations and cultures over time and highlight change over time through discussion and written argument.
3. In a manner suitable for an upper division level course, analyze historical study and inquiry through critical reading of primary documents in English translation, discussion and written argument about historical perspectives and historical questions.

HIST 369 China Since 1800

The modernization of China. Primary emphasis on political, social, and economic developments during the Manchu, Nationalist, and Communist periods.
3 Cr. Spring

Student Learning Outcomes

1. In a manner suitable for an upper division level course, evaluate the historical development of China from the late imperial times until the current era of market reform through discussion and written argument.
2. In a manner suitable for an upper division level course, compare developments in the different periods of time and to highlight change over time through discussion and written argument.
3. In a manner suitable for an upper division level course, analyze developments through discussion and written argument in one or more areas of Chinese society and culture during this period in light of the goals the Chinese themselves have set for their society and culture.
4. "In a manner suitable for an upper division level course, evaluate the issues involved in the ""modernization"" process for a non-Western culture through discussion and written argument. "

HIST 370 Africa to 1500

Origins of humans in Africa; Ancient African Kingdoms; Roman, Byzantine and Islamic influences up to the coming of the Portuguese.
3 Cr. Fall

Student Learning Outcomes

1. In a manner suitable for an upper division level course, get an analytical overview of the major historical developments that occurred in Africa from the earliest time to 1500.
2. In a manner suitable for an upper division level course, widen their horizons and make them realize Africa's contribution to World History by looking at historical developments in Africa from a global perspective.
3. In a manner suitable for an upper division level course, provide an overall myth-exploding analysis of Africa with an objective of providing a general education to students who take this course either as an elective or who have no background in African history.

HIST 371 Africa Since 1500

African reactions to European discovery, settlement, and colonial domination; European colonial regions to the advent of African self-rule.
3 Cr. Spring

Student Learning Outcomes

1. In a manner suitable for an upper division level course, get an analytical overview of the major historical developments that occurred in Africa from 1500 to the present.
2. In a manner suitable for an upper division level course, widen their horizons and make them realize Africa's contribution to World History by looking at historical developments in Africa from a global perspective.

3. In a manner suitable for an upper division level course, provide an overall myth-exploding analysis of Africa with an objective of providing a general education to students who take this course either as an elective or who have no background in African history.

HIST 380 Topics in History

An interpretive study of selected topics in history. May be repeated with different subject to a max. of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, identify major events, key figures, and dominant themes as related to the subject of the course.
2. In a manner suitable for an upper division level course, utilize historical methods and theories to analyze the subject of the course.
3. In a manner suitable for an upper division level course, cite critical readings of both primary and secondary sources and their contributions to the historiography of the subject of the course.
4. In a manner suitable for an upper division level course, compose a critical analysis of a historical trend or topic related to the subject of the course.

HIST 385 Concepts and Theories in History for Social Studies Teachers

Practical application of discipline for middle and high school. Learn philosophy of history and branching off of the other social sciences. Translate content, theory, method, into grade-appropriate classroom materials.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify, read, and analyze; in a manner suitable for an upper division level courses; primary, secondary, visual, video, historiographical, and literary sources and incorporate them into a lesson for middle or high school history courses.
2. Create, in a manner suitable for an upper division level courses, an annotated bibliography of sources identified for lesson production.
3. Analyze and critique, in a manner suitable for an upper division level courses, middle and high school history textbooks.
4. Translate, in a manner suitable for an upper division level courses, academic work into material suitable and understandable to middle and high school students of history.
5. Read and discuss, in a manner suitable for an upper division level courses, pedagogy, method, and historiography in a seminar setting.
6. Professionally present, in a manner suitable for an upper division level courses, their lessons to their peers for evaluation and constructive feedback.
7. Write and adapt, in a manner suitable for an upper division level courses, lessons for middle and high school history classes.

HIST 391 Junior Seminar

Deepening level of historical expertise and advanced career planning through analysis of primary sources, archival research, construction of historical narratives and projects, and formulating thesis questions.
Prereq.: HIST 291 Coreq.: Cr. Fall

Student Learning Outcomes

1. Describe the historical research process 2. Review diverse historical sources 3. Employ historical methodologies 4. Analyze diverse historical sources 5. Formulate a thesis 6. Interpret diverse historical sources

HIST 402 The Middle East

The rise and development of medieval Islamic civilization; the Middle East under the Ottomans; the recent age.
3 Cr. Even Spring

Student Learning Outcomes

1. In a manner suitable for an upper division level course, identify major events/key figures in the formation of Islam and Islamic civilization from pre-Islamic Arabia through the Ottoman period.
2. In a manner suitable for an upper division level course, trace the expansion and transformation of the Ottoman Empire from the thirteenth century to 1918.
3. In a manner suitable for an upper division level course, utilize historical methods and theories to analyze Arab nationalism, Zionism, and the creation of the state of Israel.
4. In a manner suitable for an upper division level course, cite critical readings of both primary and secondary sources and their contribution to the historiography of the Middle East.
5. In a manner suitable for an upper division level course, compose a critical analysis of a historical trend or topic related to the history of the Middle East.

HIST 403 Medieval Europe, 325-1500

Political, economic and cultural history of Europe from the later Roman Empire to the end of the fifteenth century.
3 Cr. Odd Fall

Student Learning Outcomes

1. In a manner suitable for an upper division level course, identify major events/key figures in the transformation of the Greco-Roman world to the formation of its three beneficiary civilizations: Byzantium, Latin Christendom, and Islam.
2. In a manner suitable for an upper division level course, trace the political, economic, and cultural expansion and transformation of the Latin Christendom.
3. In a manner suitable for an upper division level course, utilize historical methods and theories to analyze the impact of the fourteenth century on European civilization.
4. In a manner suitable for an upper division level course, cite critical readings of both primary and secondary sources and their contributions to the historiography of Medieval Europe.
5. In a manner suitable for an upper division level course, compose a critical analysis of a historical trend or topic related to the history of Medieval Europe.

HIST 404 The Renaissance, 1300-1500

Growth of the secular spirit and state; rise of humanism; social and economic forces; beginning of European expansion; the dawn of modern science.
3 Cr. Fall

Student Learning Outcomes

1. In a manner suitable for an upper division level course, evaluate similarities and differences between Middle Ages and Renaissance in European history.
2. In a manner suitable for an upper division level course, analyze how political, economic and cultural elements in central and northern Italy influenced the development of republican institutions and civic culture in Italy.
3. In a manner suitable for an upper division level course, evaluate the writings of Italian humanists and apply their historical values and ramifications in contemporary contexts.

HIST 405 The Reformation, 1500-1648

Protestant and Catholic Reformations; religious wars, rise of the modern state, modern culture and capitalism.
3 Cr. Spring

Student Learning Outcomes

1. In a manner suitable for an upper division level course, evaluate similarities and differences between Middle Ages and Renaissance/Reformation in European history.
2. In a manner suitable for an upper division level course, analyze how political, economic, cultural, and religious elements in early modern Europe influenced the development of religious reformations and religious wars in different countries.
3. In a manner suitable for an upper division level course, evaluate the writings of both Protestant and Catholic reformers and apply their historical ramifications in contemporary contexts.

HIST 408 Europe and World War I

Origins of World War I; the war and peace settlement; Russian Revolution; post-war problems; origins and rise of Fascism and Nazism.
3 Cr. Even Fall

Student Learning Outcomes

1. Understand the complex history of the First World War by examining it through European, National and Continental viewpoints, as well as a global perspective of the conflict.
2. Experience, with in-class discussion, the First World War through group and individual discussion of specfic class topics related to the historical conflict.
3. Gain experience with the critical analysis of primary source historical documents, chiefly in the areas of memoirs and published letters from the era of World War One.
4. Improve writing skills in history through the preparation of short and medium-length analytical papers on topics such as the origins of the war, the nature of the Soviet revolution, the post-war peace settlement, and the failure to preserve peace in Europe after 1918.
5. Analyze and discuss the memory of the First World War in European consciousness, as that memory has been portrayed in film, books, ceremony, and monuments.

HIST 409 Europe and World War II

Causes of World War II; the war and post-war problems; adjustments which have created

contemporary Europe.
3 Cr. Even Spring

Student Learning Outcomes

1. In a manner suitable for an upper division level course, evaluate and debate the political, socio-economic origins of the Second World War in Europe, within a global perspective.
2. In a manner suitable for an upper division level course, analyze historical problems of the war through in-class debate and open class discussion.
3. In a manner suitable for an upper division level course, critique primary sources associated with the War, including contemporary-era films, memoirs, and published documents.
4. In a manner suitable for an upper division level course, improve writing skills through analytical papers on topics such as +appeasement+; the nature of fascism, Stalinism, and the Nazis; the impact of the war on the Western democracies; genocide and mass-death; and the origins of the Cold War after 1945.
5. In a manner suitable for an upper division level course, analyze the social memory of the First [Second?] World War in European consciousness, as portrayed in film, books, ceremony, and monuments.

HIST 411 The Holocaust

The history and implications of the Nazi genocide; historiographical issues.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, assess and distinguish the roots of anti-Semitism, as well as other social prejudices, which existed in European culture by the twentieth century.
2. In a manner suitable for an upper division level course, analyze the nature of National Socialism in a wider context of European values during the Second World War era.
3. In a manner suitable for an upper division level course, improve writing skills through analytical papers on topics such as the wider ideologies of extermination or repression, the experience of rescue and resistance, and how the wider world reacted to the Holocaust.
4. In a manner suitable for an upper division level course, analyze the long-term effects of the Holocaust on its survivors, and how future generations have sought to cope with its trauma.

HIST 418 History of Social Welfare in the U.S.

Survey and analysis of the development of social welfare concerns in the U.S. as they have been shaped by a combination of social, political, and economic factors.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course; identify key events, individuals, and organizations involved in social welfare from the Second Great Awakening to the Great Society.
2. In a manner suitable for an upper division level course; explore the ways political, social, and economic institutions have marginalized groups and awarded or not social welfare at various times over the course of U.S. history.
3. In a manner suitable for an upper division level course, read and analyze primary sources from different eras of social welfare history in the U.S.
4. In a manner suitable for an upper division level course, interpret historiographical arguments in the study of social welfare such as the Progressive era evolution of Social Work and the Social Gospel for instance.
5. In a manner suitable for an upper division level course, recognize and integrate the various discipline specific perspectives (history, social work, psychology, public policy, sociology, etc.) in the history of social welfare in the United States.

HIST 420 Colonial North America (Diversity)

Cultural, political, military, economic, and social experiences.
3 Cr. DEMAND GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

Student Learning Outcomes

1. Demonstrate, in a manner suitable for an upper division level course, knowledge of the discipline of history by identifying the principles of historiography and its limitations.
2. Identify and read, in a manner suitable for an upper division level course, primary sources that show how Native Americans, African Americans, and Europeans contributed to and were affected by historical events in colonial North America.
3. Analyze, in a manner suitable for an upper division level course, historiographical interpretations of the contributions that Native American, African American, and European populations made to the history of colonial North America.
4. Demonstrate, in a manner suitable for an upper

division level course, historical analysis through quality written work which includes utilization of primary and secondary source materials.
5. Correctly utilize, in a manner suitable for an upper division level course, important analytical categories--such as gender, race, class, and age--as a way to explain and understand political, economic, and religious events in colonial North America.

HIST 421 Revolutionary America, 1763-1791

Revolutionary era society, the American Revolution, the War for Independence, and the development of self-rule through the adoption of the Bill of Rights.
3 Cr. Spring

Student Learning Outcomes

1. In a manner suitable for an upper-division course, evaluate the origins, development, resolution, and ramifications of the American Revolution and the U.S. Constitution.
2. In a manner suitable for an upper-division course, evaluate the various historiographical interpretations of the American Revolutionary and Constitutional eras.
3. In a manner suitable for an upper-division course, write well-structured essays that examine significant themes in the history of the Revolutionary and Constitutional eras.
4. In a manner suitable for an upper-division course, read and demonstrate understanding of a wide range of both primary and secondary materials regarding the Revolutionary and Constitutional eras.

HIST 422 Launching A Nation: America 1792-1848

Territorial expansion, reform, social change, economic development and growth of political democracy from the Federalist Era to the Mexican-American War.
3 Cr. Fall

Student Learning Outcomes

1. In a manner suitable for an upper-division course; evaluate religious revivals, social reform movements, the emerging market economy, expanding suffrage, shifting race and gender relations, and the development of modern political parties.
2. In a manner suitable for an upper-division course; evaluate the various historiographical interpretations of the various topics studied in the course.
3. In a manner suitable for an upper-division course; write well-structured essays that examine significant themes in the history of the early republic and antebellum eras.
4. In a manner suitable for an upper-division course; read and demonstrate understanding of a wide range of both primary and secondary materials regarding the history of the early republic and antebellum eras.

HIST 423 Civil War and Reconstruction U.S. 1848-1877

Sectionalism, disunion and war; the Confederacy, reunion and reaction.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, identify, read, and analyze primary and secondary sources.
2. In a manner suitable for an upper division level course, read and discuss various historiographical interpretations of the Antebellum period, the American Civil War, and postwar Reconstruction.
3. In a manner suitable for an upper division level course, explore and explain causes and conditions leading to the American Civil War.
4. In a manner suitable for an upper division level course, describe the political, cultural, religious, economic, and social differences among the three major regions in the United States in the middle of the nineteenth century.
5. In a manner suitable for an upper division level course, interpret the perspectives of Americans of African descent in the American South, in the slave states that remained loyal to the United States, and in the free states in the north and west of the country.
6. In a manner suitable for an upper division level course, apply historical methods to the study of an individual person or group as they experience the War and its aftermath.
7. In a manner suitable for an upper division level course, identify and analyze the various reconstruction plans and implemented programs from 1862 to 1877.
8. In a manner suitable for an upper division level course, analyze and interpret the meaning of the Civil War Amendments to the U.S. Constitution in Reconstruction and beyond.

HIST 425 Reform, War and Change: U.S. 1890-1945

Social, economic, cultural, and political trends, issues, and change, including progressivism,

depression, war, urbanization.
3 Cr. DEMAND

Student Learning Outcomes
1. In a manner suitable for an upper division level course, evaluate major trends and counter trends, economic, political, social, and cultural, in the American experience, 1890-1945.
2. In a manner suitable for an upper division level course, analyze the impact of foreign forces on the fabric of American life, 1890-1945.
3. In a manner suitable for an upper division level course, analyze the impact of foreign forces on the fabric of American life, 1890-1945.

HIST 426 The Cold War and American Life
Impact of the Cold War on the economic, political and social development of the United States after World War II.
3 Cr. DEMAND

Student Learning Outcomes
1. In a manner suitable for an upper-division course, closely examine the political, cultural, and social imprint that the Cold War made on American life, using popular media as well as scholarly sources.
2. In a manner suitable for an upper-division course, through discussion and written argument, compare and evaluate interpretations of the politics and culture of this era.
3. In a manner suitable for an upper-division course, demonstrate command of the interconnection between politics, popular culture, and society in written and oral presentations developed through independent research.

HIST 433 Russia, 1700-1917
Politics, diplomacy, society, economics, and culture from Peter the Great to the Revolution.
3 Cr. DEMAND

HIST 434 Soviet Russia Since 1917
Historical survey of politics, society, economics, and culture.
3 Cr. DEMAND

Student Learning Outcomes
1. Identify research strategies (both print and online) and conduct research into the opportunities, requirements, and expectations for employment in a selected travel and tourism field.
2. Research a contemporary issue in travel and tourism, and describe its impact on tourism operations and travel behavior.
3. Evaluate how cultural (sustainability, ethics) or physical (global warming) trends impact a desired employment track in travel and tourism.
4. Create a personal portfolio illustrating their academic projects, writing examples and practical experience.

HIST 444 Internship
Participation as an intern in history with a cooperating historical, government, business, or civic organization whose intern program has been approved in advance by the department.
Coreq.: 1-9 Cr. DEMAND

Student Learning Outcomes
1. In a manner suitable for an upper division level course, identify with a faculty advisor an historical institution (museum, school, historical society, library, archive, historic site, historic preservation organization, etc.) at which to serve.
2. In a manner suitable for an upper division level course, communicate with director of historical institution about expectations and duties of internship.
3. In a manner suitable for an upper division level course, interpret and explain historical exhibits, organize archival material, catalog historical documents and artifacts, conduct tours of historical sites, or conduct historical research for a designated project or exhibit.
4. In a manner suitable for an upper division level course, report on the internship to advisor in writing and orally.

HIST 445 United States Military History
Military problems and accomplishments from 1775 to the present.
3 Cr. DEMAND

Student Learning Outcomes
1. In a manner suitable for an upper division level course, demonstrate knowledge of the discipline of history by identifying the principles of historiography and its limitations.
2. In a manner suitable for an upper division level course, identify and read primary sources that show how members of military forces and civilian populations contributed to and were affected by armed conflicts involving the United States.
3. In a manner suitable for an upper division level course, analyze historiographical interpretations of the contributions that members of the military made

to the history of the United States in a way that would be appropriate for an upper division level course.
4. In a manner suitable for an upper division level course, demonstrate historical analysis through quality written work which includes utilization of primary and secondary source materials. This should be accomplished at a level suitable for an upper division level course.
5. In a manner suitable for an upper division level course, correctly utilize important analytical categories; such as gender, race, class, and age as a way to explain and understand the history of warfare in the United States. This should be accomplished in a manner appropriate for an upper division level class.

HIST 447 American Urban History

Urban America from colonial to modern times; the origin and growth of cities and their impact upon the development of the U.S. An elective for majors in Urban Studies.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper-division course; explore key issues and themes that inform American urban and suburban history through primary and secondary literature that provide a close examination of selected cities, with special attention to the intersection of culture and the built environment.
2. In a manner suitable for an upper-division course; identify economic, political, and social patterns and variables that over time have benefited or damaged the human and physical landscape of urban areas.
3. In a manner suitable for an upper-division course; through discussion and written argument use historical evidence to address current issues facing urban and suburban communities.

HIST 448 Culture, Conflict and Value in America

Puritanism, revivalism, American political thought, economic values, agrarianism, reform movements, literary traditions, individualism are among the discussed topics.
3 Cr. Fall

Student Learning Outcomes

1. In a manner suitable for an upper-division course, evaluate the cultural and intellectual foundations of American religion, philosophy, gender dynamics, racial dynamics, politics, and popular movements.
2. In a manner suitable for an upper-division course, evaluate the various historiographical interpretations of of the various topics studied in the course.
3. In a manner suitable for an upper-division course, write well-structured essays that examine significant themes in American cultural and intellectual history.
4. In a manner suitable for an upper-division course, read and demonstrate understanding of a wide range of both primary and secondary materials regarding American cultural and intellectual history.

HIST 451 American Families

The family and its relationship to the individual and the community from pre-industrial British colonial America to the late twentieth century.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, identify, read, and analyze primary and secondary sources.
2. In a manner suitable for an upper division level course, read, analyze, and discuss family histories from a variety of communities and periods in U.S. History.
3. In a manner suitable for an upper division level course, compare life cycles and family dynamics of indigenous people, Europeans, Africans, people of color, and/or immigrants, from various eras in U.S. history from pre-contact to the present.
4. In a manner suitable for an upper division level course, identify, study, and analyze genealogical records, including U.S. and state census records, account books, family bibles, letters, diaries, journals, memoirs, and other family records.
5. In a manner suitable for an upper division level course, apply historical methods to the study of an individual family over four generations.
6. In a manner suitable for an upper division level course, place their own family for four generations into the historical context of the United States and the world.

HIST 456 U.S. Foreign Relations from World War I

The U.S. as a world power; diplomatic policies in two world wars and their aftermath.
3 Cr. DEMAND

HIST 458 The American West

Topical and chronological consideration of western land policy, territorial government, Indian policy,

economic development.
3 Cr. DEMAND

Student Learning Outcomes
1. In a manner suitable for an upper-division course, evaluate major economic, political, social, and cultural forces that defined or influenced the American West.
2. In a manner suitable for an upper-division course, examine and identify key elements and examples relating to images and mythology of the West, federal Indian policy, tribal and American Indian resistance and adaptations to federal policy, and the continued impact of the federal government on the American West.
3. In a manner suitable for an upper-division course, consider how varied cultural, ethnic, racial, and religious communities have interacted in the West, contributed to the regions development, and maintained cultural traditions.
4. In a manner suitable for an upper-division course, write well-structured essays that examine significant themes in American Indian history.
5. In a manner suitable for an upper-division course, recognized and evaluate the historiography of the West as it pertains to federal policy; regional developments; gender, race, religion, and ethnicity; and the evolution of portrayals and understandings of the region.
6. In a manner suitable for an upper-division course, conduct historical research on a particular region within the West, critically examine perspectives of distinct sources pertaining to that area, and develop a deeper understanding of historical scholarship that explores that region.

HIST 467 Modern Japan

Japanese history, 1800-present, emphasizing political developments, social and economic change, culture and intellectual achievements.
3 Cr. Fall

Student Learning Outcomes
1. In a manner suitable for an upper division level course, analyze the historical, social, political and economic development of Japan from the late Tokugawa period until the present through discussion and written argument.
2. In a manner suitable for an upper division level course, compare developments in the different periods of time and to highlight change over time through discussion and written argument.
3. In a manner suitable for an upper division level course, analyze developments through discussion and written argument in one or more areas of Japanese society in light of the goals of the Japanese themselves.
4. "In a manner suitable for an upper division level course, evaluate the issues involved in the ""modernization"" process for a non-Western culture through discussion and written argument. "

HIST 480 Seminar in American History

Intensive reading and research in one area or topic of U.S. or Latin American history. Limited to junior, senior or graduate students or permission of the instructor. May be repeated with different topics to a maximum of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. In a manner suitable for an upper division level course, explore the historiography of a topic/era in the history of the Western hemisphere.
2. In a manner suitable for an upper division level course, read and discuss texts on the history of the region, including those dealing with politics, economics, culture, religion, conflict, race, and/or social issues.
3. In a manner suitable for an upper division level course, identify, read, and analyze primary and secondary sources in the given topic or era in the history of an area or all of the Americas.
4. In a manner suitable for an upper division level course, conduct primary and/or secondary research in a topic in this region of the world.
5. In a manner suitable for an upper division level course, write and present research projects to the class.

HIST 483 Seminar in European History

Bibliographical study, research, and discussion of a selected topic. Limited to junior, senior or graduate student or permission of instructor. May be repeated with different topic. Max. 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. In a manner suitable for an upper division level course, evaluate similarities and differences among the historical trends in content area.
2. In a manner suitable for an upper division level course, analyze how political, economic and cultural elements influence historical development among the states, peoples, or societies in content area.
3. In a manner suitable for an upper division level

course, identify historical problems in content area and apply appropriate solutions in contemporary contexts.

HIST 486 Seminar in Africa, Asia, or Middle East

Reading and research on a selected topic. Limited to junior, senior or graduate students or permission of the instructor. May be repeated with different topics to a maximum of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes

1. In a manner suitable for an upper division level course, evaluate similarities and differences among the historical trends in content area.
2. In a manner suitable for an upper division level course, analyze how political, economic and cultural elements influence historical development among the states, peoples, or societies in content area.
3. In a manner suitable for an upper division level course, identify historical problems in content area and apply appropriate solutions in contemporary contexts.

HIST 490 Craft of the Historian

Historiography, critical evaluation of sources, and methods of historical research. Required of all BA history majors. Must be taken prior to HIST 491.
3 Cr. Fall

Student Learning Outcomes

1. In a manner suitable for an upper division level course, identify the principles of historiography and its limitations.
2. In a manner suitable for an upper division level course, effectively engage and critique various forms of historical presentation, including monographs, scholarly articles, documentary films, and oral reports.
3. In a manner suitable for an upper division level course, evaluate both primary and secondary sources as utilized by different historians.
4. In a manner suitable for an upper division level course, utilize historical methods and theories to undertake preliminary research on a chosen historical trend or topic.
5. In a manner suitable for an upper division level course, cite critical readings of both primary and secondary sources and their contributions to the historiography of a chosen historical trend or topic.
6. In a manner suitable for an upper division level course, compose a critical analysis of the historiography of a chosen historical trend or topic.

HIST 491 Senior Research Seminar

Research on a specialized historical topic culminating in a seminar paper or project. Required of all B.A. history majors.
Prereq.: HIST 391 3 Cr. Spring

Student Learning Outcomes

1. In a manner suitable for an upper division level course, research a chosen historical trend or topic, utilizing both primary and secondary sources.
2. In a manner suitable for an upper division level course, analyze critically, keeping in mind historical methods and theories, a chosen historical trend or topic.
3. In a manner suitable for an upper division level course, write a senior seminar paper, which will include a historiographical essay, on a chosen historical trend or topic.
4. In a manner suitable for an upper division level course, effectively engage in the peer review process. Provide and respond to feedback regarding written essays.
5. In a manner suitable for an upper division level course, present orally the results of their research.

Honors Program (HONS)

HONS 100 Honors Seminar I

Introduction to the Honors Program and to scholarship at the college level. Study skills for academically accomplished students, community building, leadership development, and service learning. Campus resources. Avoiding common pitfalls. Participation in the university as an intellectual and human community. Required in a student's first year in Honors.
Coreq.: HONS 106 2 Cr. Fall

Student Learning Outcomes

1. Employ a variety of models of knowledge as the foundations of a liberal arts education.
2. Utilize personal and social awareness to connect and contrast traditionally distinct bodies of knowledge.
3. Draw connections between their own history (interests, abilities, weaknesses) and projected future (perceiving growth and mastery in studies, professions, career, and adult life).
4. Deploy and utilize campus services, programs, and resources in order to be a successful student and lifelong learner.

HONS 106 Honors Seminar II

Continuation of HONS 100. Community building, leadership development, service learning, and life skills for academically talented students. Required in a student's first year in Honors.
1 Cr. Spring

Student Learning Outcomes
1. Illustrate and compare the liberal arts basis for contrasting and disparate academic disciplines.
2. Design and present a model/display integrating two distinct academic disciplines.
3. Describe the 10 MnTC Goals liberal arts requirements.
4. Participate and document a service learning project.
5. Show evidence of community building and leadership engagement.

HONS 110 Honors Mathematics

Introduction to problem solving and decision making strategies using mathematical and logical modes of thinking. Development of skills to communicate, defend, and evaluate solutions and decisions. Substitutes for MATH 193 or STAT 193, by departmental approval, in any SCSU requirement.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Illustrate historical and contemporary applications of mathematical/logical systems.
2. Clearly express mathematical/logical ideas in writing.
3. Explain what constitutes a valid mathematical/logical argument (proof).
4. Apply higher-order problem-solving and/or modeling strategies.

HONS 111 Honors Diversity Mathematics (Diversity/MGM)

3 Cr. Fall | Spring

Student Learning Outcomes
1. Illustrate historical and contemporary applications of mathematical/logical systems.
2. Clearly express mathematical/logical ideas in writing.
3. Explain what constitutes a valid mathematical/logical argument (proof).
4. Apply higher-order problem-solving and/or modeling strategies.

HONS 113 Honors Gender Focus Mathematics (Diversity/MGM-Gender)

3 Cr. Fall | Spring

Student Learning Outcomes
1. Illustrate historical and contemporary applications of mathematical/logical systems.
2. Clearly express mathematical/logical ideas in writing.
3. Explain what constitutes a valid mathematical/logical argument (proof).
4. Apply higher-order problem-solving and/or modeling strategies.

HONS 130 Honors Natural Science with Lab or Field Experience

Introduction to natural science principles and the methods of scientific inquiry incorporating practical experience in the lab or field. Content varies, reflecting a wide range of natural science disciplines. Repeatable for up to 6 credits when taken from different science departments.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop; in greater depth; students, laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

HONS 131 Honors Natural Science with Lab or Field Experience (Diversity/MGM)

Same as 130, but with a special focus on multicultural, international, or ethnic subject matter. Rrepeatable for up to 6 credits when taken from different science departments.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop; in greater depth; students, laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

HONS 133 Honors Natural Science with Lab or Field Experience (Diversity/MGM-Gender)

Same as 130, but with a special focus on gender-related subject matter. Repeatable for up to 6 credits when taken from different science departments.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop; in greater depth; students, laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

HONS 140 Honors Non-lab Natural Science

Introduction to natural science principles and the methods of scientific inquiry in a classroom setting. Content varies, reflecting a wide range of natural science disciplines. Repeatable for up to 6 credits when taken from different science departments.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students, laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

HONS 141 Honors Non-lab Natural Science (Diversity/MGM)

Same as 140, but with a special focus on multicultural, international, or ethnic subject matter. Repeatable for up to 6 credits when taken from different science departments.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth; students, laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

HONS 143 Honors Non-lab Natural Science (Diversity/MGM-Gender)

Same as 140, but with a special focus on gender-related subject matter. Repeatable for up to 6 credits when taken from different science departments.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth; students, laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

HONS 160 Honors English Composition

Introduction to effective communication through the writing process. Content varies, reflecting humankind's literary and intellectual wealth and the variety of ways to approach it. Substitutes for ENGL 191 or ENGL 198 in any SCSU requirement. Repeatable for up to 8 credits with different content.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
2. Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

HONS 161 Honors English Composition (Diversity/MGM)

Same as HONS 160, but with a special focus on multicultural, international, or ethnic subject matter. Repeatable for up to 8 credits with different content.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
2. Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

HONS 163 Honors English Composition (Diversity/MGM-Gender)

Same as HONS 160, but with a special focus on gender-related subject matter. Repeated for up to 8 credits with different content.
4 Cr. Fall | Spring

Student Learning Outcomes

1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
2. Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

HONS 168 Honors Information Literacy

Introduction to college-level research using a variety of online tools and resources. Will include a focus on learning efficient research strategies and critically evaluating materials. Can not also receive credit for IM 104 or 204.
1 Cr. Spring

Student Learning Outcomes

1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation
2. Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

HONS 170 Introduction to Communication Studies

Interpersonal communication, small group communication and public speaking. Theory and experience to relate meaningfully, think critically, organize clearly, and speak and listen effectively. Substitutes for CMST 192 in any SCSU requirement.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
2. Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

HONS 180 Honors English Composition Alternative

An alternate way to meet the Goal 1 writing requirement when taken with 198.
3 Cr. DEMAND

Student Learning Outcomes

1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
2. Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

HONS 181 Honors English Composition Alternative (Diversity-MGM-Gender)

Same as 180, but with a special focus on multicultural, international, or ethnic subject matter.
3 Cr. DEMAND

Student Learning Outcomes

1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
2. Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

HONS 183 Honors English Composition Alternative (Diversity/MGM-Gender)

Same as 180, but with a special focus on gender-related subject matter.
3 Cr. DEMAND

Student Learning Outcomes

1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
2. Participate effectively in groups with emphasis on

listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

HONS 198 Honors Research Paper Alternative

When paired with 196 or with another Honors English offering, an alternate way to meet the Goal 1 writing requirement for students with certain kinds of English transfer or AP credits, as described in Honors Goal Area 1. Students with prior credits in English need to see an adviser to determine which classes will finish out the Honors writing requirement.
1 Cr. DEMAND

Student Learning Outcomes
1. Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
2. Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
3. Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
4. Select appropriate communication choices for specific audiences.
5. Construct logical and coherent arguments.
6. Use authority, point-of-view, and individual voice and style in their writing and speaking.
7. Employ syntax and usage appropriate to academic disciplines and the professional world.

HONS 210 Honors Ethical and Civic Responsibility

Introduction to the rights and responsibilities of citizens, institutions, and governing bodies. Skills in responsible, participatory citizenship. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Examine, articulate, and apply their own ethical views.
2. Understand and apply core concepts (e.g. politics, rights and obligations, justice, liberty) to specific issues.
3. Analyze and reflect on the ethical dimensions of legal, social, and scientific issues.
4. Recognize the diversity of political motivations and interests of others.
5. Identify ways to exercise the rights and responsibilities of citizenship

HONS 211 Honors Ethical and Civic Responsibility (Diversity/MGM)

Same as 210, but with a special focus on multicultural, international, or ethnic subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Examine, articulate, and apply their own ethical views.
2. Understand and apply core concepts (e.g. politics, rights and obligations, justice, liberty) to specific issues.
3. Analyze and reflect on the ethical dimensions of legal, social, and scientific issues.
4. Recognize the diversity of political motivations and interests of others.
5. Identify ways to exercise the rights and responsibilities of citizenship.

HONS 213 Honors Ethical and Civic Responsibility (Diversity/MGM-Gender)

Same as 210, but with a special focus on gender-related subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Examine, articulate, and apply their own ethical views.
2. Understand and apply core concepts (e.g. politics, rights and obligations, justice, liberty) to specific issues.
3. Analyze and reflect on the ethical dimensions of legal, social, and scientific issues.
4. Recognize the diversity of political motivations and interests of others.
5. Identify ways to exercise the rights and responsibilities of citizenship.

HONS 220 Honors Human and Physical Environment

Introduction to the interrelatedness of human society and the environment taught from a natural

science point of view. Examination of the connection between bio-physical and socio-cultural systems. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
2. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
3. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
4. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
5. Propose and assess alternative solutions to environmental problems.
6. Articulate and defend the actions they would take on various environmental issues.

HONS 221 Honors Human and Physical Environment (Diversity/MGM)

Same as 220, but with a special focus on multicultural, international, or ethnic subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
2. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
3. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
4. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
5. Propose and assess alternative solutions to environmental problems.
6. Articulate and defend the actions they would take on various environmental issues.

HONS 223 Honors Human and Physical Environment (Diversity/MGM-Gender)

Same as 220, but with a special focus on gender-related subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
2. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
3. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
4. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
5. Propose and assess alternative solutions to environmental problems.
6. Articulate and defend the actions they would take on various environmental issues.

HONS 230 Honors Fine Arts

Introduction to visual and performing arts. Content varies. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate awareness of the scope and variety of works in the arts and humanities.
2. Understand those works as expressions of individual and human values within an historical and social context.
3. Respond critically to works in the arts and humanities.
4. Engage in the creative process or interpretive performance.
5. Articulate an informed personal reaction to works in the arts and humanities.

HONS 231 Honors Fine Arts (Diversity/MGM)

Same as 230, but with a special focus on multicultural, international, or ethnic subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate awareness of the scope and variety of works in the arts and humanities.
2. Understand those works as expressions of individual and human values within an historical and social context.
3. Respond critically to works in the arts and

humanities.
4. Engage in the creative process or interpretive performance.
5. Articulate an informed personal reaction to works in the arts and humanities.

HONS 233 Honors Fine Arts (Diversity/MGM-Gender)

Same as 230, but with a special focus on gender-related subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate awareness of the scope and variety of works in the arts and humanities.
2. Understand those works as expressions of individual and human values within an historical and social context.
3. Respond critically to works in the arts and humanities.
4. Engage in the creative process or interpretive performance.
5. Articulate an informed personal reaction to works in the arts and humanities.

HONS 240 Honors Literature and Humanities

Introduction to reading, thinking and writing about literature or other humanities in general. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate awareness of the scope and variety of works in the arts and humanities.
2. Understand those works as expressions of individual and human values within an historical and social context.
3. Respond critically to works in the arts and humanities.
4. Engage in the creative process or interpretive performance.
5. Articulate an informed personal reaction to works in the arts and humanities.

HONS 241 Honors Literature and Humanities (Diversity/MGM)

Same as 240, but with special focus on multicultural, international, or ethnic subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate awareness of the scope and variety of works in the arts and humanities.
2. Understand those works as expressions of individual and human values within an historical and social context.
3. Respond critically to works in the arts and humanities.
4. Engage in the creative process or interpretive performance.
5. Articulate an informed personal reaction to works in the arts and humanities.

HONS 250 Honors Philosophy

Introduction to critical thinking about basic questions in any area of life or existence. Content varies, reflecting the wide range in philosophical inquiry and in ways to approach it. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.
3. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

HONS 251 Honors Diversity Philosophy (Diversity/MGM)

Same as 250, but with special focus on multicultural, international, or ethnic subject matter. Rrepeatble for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which

can give alternative meanings or solutions to given situations or problems.
3. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

HONS 253 Honors Philosophy (Diversity/MGM-Gender)

Same as 250 but with special focus on gender-related subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.
3. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

HONS 260 Honors Social Science

An introduction to the nature and methods of social science. Content varies, reflecting the range of human sciences and approaches to learning about them. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe or use the methods and data by which historians, social scientists, or behavioral scientists investigate human conditions.
2. Analyze human behavior, cultures, and social institutions and processes from the perspectives of history or the social and behavioral sciences.
3. Develop explanations for and explore solutions to historical or contemporary social problems.
4. Reflect upon themselves in relation to family, communities, society, culture, and/or their histories.
5. Apply and critique alternative explanatory systems or theories about human societies and behaviors.

HONS 261 Honors Diversity Social Science (Diversity/MGM)

Same as 260, but with special focus on multicultural, international, or ethnic subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe or use the methods and data by which historians, social scientists, or behavioral scientists investigate human conditions.
2. Analyze human behavior, cultures, and social institutions and processes from the perspectives of history or the social and behavioral sciences.
3. Develop explanations for and explore solutions to historical or contemporary social problems.
4. Reflect upon themselves in relation to family, communities, society, culture, and/or their histories.
5. Apply and critique alternative explanatory systems or theories about human societies and behavior.

HONS 263 Honors Social Science (Diversity/MGM-Gender)

Same as 260, but with special focus on gender-related subject matter. Repeatable for up to 6 credits with different content.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe or use the methods and data by which historians, social scientists, or behavioral scientists investigate human conditions.
2. Analyze human behavior, cultures, and social institutions and processes from the perspectives of history or the social and behavioral sciences.
3. Develop explanations for and explore solutions to historical or contemporary social problems.
4. Reflect upon themselves in relation to family, communities, society, culture, and/or their histories.
5. Apply and critique alternative explanatory systems or theories about human societies and behaviors.

HONS 300 Special Topics

This group repeatable for up to 6 credits.
3 Cr. DEMAND

HONS 301 Special Topics (Diversity/MGM)

This group repeatable for up to 6 credits.
3 Cr. DEMAND

HONS 303 Special Topics (Diversity/MGM-Gender)
This group repeatable for up to 6 credits.
3 Cr. DEMAND

HONS 411 Advanced Honors Ethical and Civic Responsibility
Same as 410, but with a special focus on multicultural, international, or ethnic subject matter.
3 Cr. Fall | Spring

HONS 413 Advanced Honors Ethical and Civic Responsibility
Same as 410, but with a special focus on gender-related subject matter.
3 Cr. Fall | Spring

HONS 420 Advanced Honors Human and Physical Environment
Advanced examination of the interrelatedness of human society and the environment taught from a natural science point of view. Examination of the connection between bio-physical and socio-cultural systems.
3 Cr. Fall | Spring

HONS 421 Advanced Honors Human and Physical Environment
Same as 420, but with a special focus on multicultural, international, or ethnic subject matter.
3 Cr. Fall | Spring

HONS 423 Advanced Honors Human and Physical Environment
Same as 420, but with a special focus on gender-related subject matter.
3 Cr. Fall | Spring

HONS 430 Advanced Honors Humanities and Fine Arts
Advanced examination of critical analysis of the behavior, ideas, and values expressed in works of human imagination and thought. Content varies, reflecting a variety of social and historical contexts.
3 Cr. Fall | Spring

HONS 431 Advanced Honors Humanities and Fine Arts
Same as 430, but with a special focus on multicultural, international, or ethnic subject matter.
3 Cr. Fall | Spring

HONS 433 Advanced Honors Humanities and Fine Arts
Same as 430, but with a special focus on gender-related subject matter.
3 Cr. Fall | Spring

HONS 440 Advanced Honors Literature
Advanced examination to reading, thinking and writing about literature. Content varies, reflecting humankind's literary wealth and the variety of ways to approach it.
3 Cr. Fall | Spring

HONS 441 Advanced Honors Literature
Same as 440, but with a special focus on multicultural, international, or ethnic subject matter.
3 Cr. Fall | Spring

HONS 443 Advanced Honors Literature
Same as 440, but with a special focus on gender-related subject matter.
3 Cr. Fall | Spring

HONS 444 Honors Internship

Coreq.: 1-6 Cr. DEMAND

HONS 460 Advanced Honors Social Science
Advanced examination to the nature and methods of social science. Content varies, reflecting the range of human sciences and approaches to learning about them.
3 Cr. Fall | Spring

HONS 461 Advanced Honors Social Science
Same as 460, but with a special focus on multicultural, international, or ethnic subject matter.
3 Cr.

HONS 463 Advanced Honors Social Science
Same as 460, but with a special focus on gender-related subject matter.
3 Cr. Fall | Spring

Hospitality and Tourism

HTSM 111 Introduction to Hospitality and Tourism

World of tourism and hospitality, with a special emphasis on its industries, systems, sectors, and career opportunities.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

HTSM 215 Geography of Tourism

Geographic regions around the world with emphasis on the cultural and physical diversity of place. Examines how geographic diversity influences and affects global tourism patterns, business and activities.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

HTSM 294 Hospitality Management

Survey of the major elements of Hospitality and its operations, including hotel management, restaurant operations, convention and event planning and attraction operations.
Prereq.: Completion of HTSM 111 with a "C" grade or better. 3 Cr. Spring | DEMAND

Student Learning Outcomes

1. Acquire a basic knowledge and understanding of the hospitality industry 2. Illustrate the major segments of the hospitality industry and their operations.
3. Summarize sustainable practice principles practiced in the hospitality industry

HTSM 297 Travel Automation

Principles and practice of automated reservation systems.
3 Cr. Spring

Student Learning Outcomes

1. Encode and decode city/airport and airline codes.
2. Explain each step of the booking process and display, interpret and sell from availability displays (air, hotel and car rental).
3. Create, file, modify, change and cancel PNRs using mandatory and optional fields (air, hotel and car rental).
4. Display and explain local and corporate reservation and accommodation policies. And explain each step of the booking process.
5. Interpret vehicle/room types, as well as rate plans and categories.

HTSM 360 Transportation Systems

Organization, structure and importance of passenger transportation systems.
3 Cr. Spring

Student Learning Outcomes

1. Describe the major components in the transportation system.
2. Identify three different tourism-oriented transportation systems.
3. Illustrate the skills used in the tourism transportation network analysis.
4. Apply transportation knowledge into the development of effective tourism-oriented transportation strategies.

HTSM 362 Introduction to the Cruise Line Industry

The operations and management of the cruise line industry. Shipboard organization and delivery of the cruise product
Prereq.: HTSM 111 and HTSM 215 3 Cr. DEMAND

Student Learning Outcomes

1. Explain the history and operations of the cruise lines industry.
2. Describe challenges faced by the cruise line industry, and relate how the industry responds to those challenges 3. Identify and analyze examples of sustainable practices within the cruise lines industry

HTSM 364 Tour Operations

Directing domestic/international tours.
Prereq.: HTSM 111 3 Cr. DEMAND

Student Learning Outcomes

1. Describe the history of tourism and the role of the professional tour manager/guide.
2. Differentiate between the various types/roles of tour managers/guides.
3. List the numerous suppliers and resources used in planning, organizing and leading a group tour.
4. Create an educational tour for an international city/destination.

HTSM 368 Event and Convention Management

A systematic analysis of the meeting, exposition, event, and convention (MEEC) industry.
Prereq.: Completion of HTSM 111 with a "C" grade or better. 3 Cr. DEMAND

Student Learning Outcomes

1. Identify the major characteristics of the MEEC industry, including economic, social, cultural, and

environmental impacts generated by events and exhibitions.
2. Recognize the procedures of event/meeting planning, promotion, marketing, public relations, venue selection and on-site management.
3. Apply knowledge in the design and creation of various events/projects

HTSM 370 Introduction to Travel Writing

The art and practice of travel writing.
Prereq.: HTSM 111 and HTSM 215 3 Cr. DEMAND

Student Learning Outcomes

1. Acquire basic knowledge and understanding of travel writing.
2. Develop methods and practices commonly used by top travel writers and photographers.
3. Create and submit travel writing pieces for publication.

HTSM 372 Food Tourism

Explore the relationship between food and tourism around the world.
3 Cr. DEMAND

Student Learning Outcomes

1. Substantiate the ultimate interrelationship between foodways and culture.
2. Analyze various food experiences in tourism settings.
3. Explain tourists' food consumption behaviors in terms of tourism theories.
4. Design strategies for food tourism management based on knowledge learned from the lessons.

HTSM 395 Hospitality and Tourism Marketing

An applied course designed to explore how the tourism product is distributed to the consumer. Will develop the student's awareness of the tourism industry's channels of distribution, their inter-relationships and means for effective utilization by both distributors and consumer.
Coreq.: Cr. Spring

Student Learning Outcomes

1. Identify characteristics of hospitality and tourism (services) marketing 2. Develop strategies and tactics for the distribution and marketing of hospitality and tourism products and services.
3. Design a practical marketing plan for the distribution/sales of a hospitality/tourism product/service in a global marketplace

HTSM 396 Tourism Development

Advanced study of tourism: analyzing and planning tourism resources.
Prereq.: GEOG 290 or HTSM 111. 3 Cr. Fall

Student Learning Outcomes

1. Explain why tourism is best defined as a system vs. an industry by diagramming the various sectors, components and connective elements, and describing their characteristics and functions.
2. Distinguish between the various types of tourists and compare and contrast how each type impacts destinations.
3. Create a sustainable tourism development plan built upon their assessment (authenticity, uniqueness, quality, drawing power and expandability) of a destination's tourism resources.
4. Prepare and deliver an oral presentation based on their sustainable tourism development plan.

HTSM 415 Ethics in Hospitality and Tourism

Analysis of trends in Hospitality and Tourism toward ethical and sustainable management practices, including the formation and implementation of policy within the framework of ethical theory.
Prereq.: Completion of HTSM 111 with a "C" grade or better. 3 Cr. Spring

Student Learning Outcomes

1. Understand the ethical principles of responsible tourism development practices and the policy making process.
2. Evaluate the development, application and implementation of ethical guidelines and policy to Tourism.
3. Apply ethical theories and policies to various Hospitality and Tourism operations.

HTSM 425 Methods in Hospitality and Tourism Research

Foundations of research, research design, hypothesis testing, analysis of findings, reporting and ethical issues in tourism
Prereq.: Completion of HTSM 111 with a "C" grade or better. 3 Cr. Fall

Student Learning Outcomes

1. Explain how research supports the formation of policy, marketing strategies and practices in Hospitality and Tourism.
2. Describe the methods, theories and concepts common to Hospitality and Tourism research
3. Evaluate empirical research published in refereed

journals 4. Design a research proposal using primary and secondary data resources.

HTSM 434 Travel/Tourism Seminar

Application of selected travel/tourism concepts. Capstone course. Satisfies Upper Division Writing Requirement in Travel-Tourism B.A.
Prereq.: Completion of travel/tourism core courses and consent of instructor. 3 Cr. Fall | Spring

HTSM 444 Internship

Practical learning experiences (300 hours) in a hospitality and tourism services setting involving leadership, planning, management or operational experiences.
Prereq.: Successful completion of 15 credits within the HTSM major. Permission of field experience supervisor. 6 Cr. DEMAND

Student Learning Outcomes

1. Expand understanding, experience, and skills, while building relationships and professional connections (networks) within the Hospitality and Tourism industry.
2. Practice and enhance presentation, writing, public speaking, leadership and other transferable skills.
3. Apply, practice, integrate and refine academic knowledge and interpersonal skills in a professional environment.
4. Demonstrate an understanding of the purpose and impact of each event or activity on the hospitality/tourism organization, as well as the community.

HTSM 495 Temporary Workshop

Specific subjects selected to meet special educational needs, offered in a format different from the typical scheduled course. Exact nature of the course will be defined by the department. 1-3 Cr., ALT.
Coreq.: 1-3 Cr. Fall | Summer

HTSM 496 Tourism and the Environment

Tourism and its relationship to the physical and cultural character of place. Sustainable development, particularly when expressed as eco-tourism.
3 Cr. DEMAND

Student Learning Outcomes

1. Define ecotourism and distinguish how it differs from other forms of environmentally based tourism development.
2. Analyze a contemporary tourism activity and assess the tourism impacts of that activity upon the host destination environment, including environmental, socio-cultural and economic impacts.
3. Design strategies for green tourism practices for a particular destination or tourist activity.

HTSM 497 Tourism Policy and Planning

Advanced planning principles and policy formulation frameworks/strategies applicable to tourism development at different scales--site, destination and regional. Case studies of applied tourism planning and policies in different countries.
Prereq.: GEOG 290 or HTSM 111 3 Cr. Spring

Student Learning Outcomes

1. Identify essential planning processes for tourism destinations.
2. Apply knowledge about tourism impacts into the planning and policy making process.
3. Appraise how tourism policies or regulations shape local/national tourism development.
4. Justify effective and sustainable tourism development policies based on planning principles.

HTSM 498 Contemporary Issues in Hospitality and Tourism

Issues and contemporary trends in hospitality and tourism.
Prereq.: Completion of a minimum of 12 credits within the Hospitality and Tourism Core or by permission of instructor. Coreq.: 3-6 Cr. DEMAND

Student Learning Outcomes

1. Assess key problems and issues in the current and future development of the global hospitality and tourism industry 2. Identify key issues facing the future development of the hospitality and tourism industry 3. Collect and evaluate primary/secondary tourism data in a particular field of interest
4. Synthesize and summarize research findings using written and oral communication skills suitable for the profession

Human Relations & Multicultural Education (HURL)

HURL 102 Human Relations and Race (Diversity/RIS)

Racial oppression using a framework that analyzes the interconnection of racism and other forms of

oppression. Experiences of people of color and institutional racism in the United States.
3 Cr. Fall | Spring | Summer GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

HURL 201 Non-Oppressive Relationships I (Diversity)

Development of practical skills for eliminating racism, sexism, and other oppressive elements from personal, professional, and public life.
3 Cr. Fall | Spring | Summer GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

HURL 206 Understanding Oppression (Diversity)

Consultants from oppressed groups will share expertise on various contemporary human relations issues (racism, sexism, disabilities, poverty, religious oppression, homophobia, etc.).
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify, define, and analyze individual and institutional oppression, violence, and environmental destruction in the U.S. and globally.
2. Explain and empathize with the experiences of people or animals different than yourself.
3. Analyze and explain how oppression or justice, power and violence or peace, environmental destruction or sustainability are related to your personal life.
4. Identify and explain the complexities of money, power, and oppression, and consider personal, collective, and global actions for social & environmental justice.
5. Identify the interconnections between social justice, peace, environmental, and animal issues.
6. Practice media analysis using alternative media sources through assigned course readings.

HURL 303 Global Social and Environmental Justice

Interconnections of global social and environmental justice through analyses of media, policies, activities, and cultural perspectives. Exploring individual and collective responsibilities for a just and sustainable future.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES | GOAL AREA 10: ENVIRONMENTAL ISSUES

HURL 402 Current Issues in Human Relations

Analysis of issues or problem areas in human relations. A specific topic will be selected each time the course is offered. May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Critically analyze the historical and contemporary literature, media, and information about a particular Human Relations issue.
2. Evaluate the outcomes of various policies and practices pertaining to this issue on peace, social and/or environmental justice in the United States and globally.
3. Locate and/or create and apply actions to influence policies and practices toward nonviolence, and social and environmental justice.

HURL 406 Sexual Assault Advocacy Training

Advocacy skills for sexual assault survivors including: understanding the impact of sexual assault on survivors, the social and cultural context in which sexual assault occurs, and the role the legal system, law enforcement, social services and medical services plays with survivors.
Prereq.: HURL 201 or HURL 497 3 Cr. Fall | Summer

Student Learning Outcomes

1. Describe the impact of sexual assault on victims.
2. Analyze the impact of patriarchy and the social and cultural context in which sexual assault occurs.
3. Evaluate the role each professional plays in relation to the crime of sexual assault such as law enforcement, the judicial system, social services, and medical services.
4. Practice the application of specific skills in support and advocacy to sexual assault survivors.
5. Locate and take actions for the prevention of sexual assault.

HURL 408 Global Human Relations

A global analysis of racism, sexism, heterosexism, class issues, and the interrelationships of global social justice issues.
Prereq.: HURL 201 or HURL 497 3 Cr. Fall

Student Learning Outcomes

1. Identify the politico-economic structures that shape global human relations.
2. Differentiate the power systems that determine how diverse societies' quality of life is constructed.
3. Classify different politic-economic structures and their impact on the daily interaction of respective global communities.

4. Assess the personal narratives of citizens of the globe as they present their respective lives.

HURL 411 Heterosexism

Institutionalized heterosexism and homophobia and the impact on lesbian-gay-bisexual-transgender-queer people.
Prereq.: HURL 201 or HURL 497 3 Cr. DEMAND

Student Learning Outcomes

1. Critically analyze the mechanisms of social construction of gender, sexism, and their connections to the construction and maintenance of heterosexism and homophobia in the US and globally.
2. Identify the definitions, structures, and manifestations of heterosexism and homophobia.
3. Describe racism, classism, sexism, ableism, and forms of oppression within the LBGTQ community and movements within the community to forge alliances for social justice for all.
4. Apply strategies of organizing, coalition building, and activism for personal and institutional social change for gender and LBGTQ justice.

HURL 412 Disability Rights

Disability rights from the perspective of disability activits, examined within an oppression framework that analyzes the parallels and differences between ableism and other forms of oppression. Explores historical and contemporary movements for accessibility and empowerment.
Prereq.: HURL 201, HURL 497 3 Cr. DEMAND

Student Learning Outcomes

1. Understand historical and contemporary views of disability issues by activitists with disabilities.
2. Define multiple identities as well as study a variety of activist groups within the Disability Community.
3. Recognize the causes of various barriers faced by people with disabilities in areas such as physical access, transportation, employment, education, healthcare, sexuality and quality of life.
4. Apply critical thinking skills to issues of disability oppression.
5. Develop an awareness of how the media portrays people with disabilities.
6. Develop activist and advocacy skills for societal change.
7. Define personal empowerment strategies for people with disabilities.

HURL 418 Xenophobia

Xenophobic attitudes, practices, and their impact on human rights. U.S. interventions and issues of torture, terrorism and related war crimes.
Prereq.: HURL 201 or HURL 497 3 Cr. DEMAND

Student Learning Outcomes

1. Define institutional, interpersonal and individual xenophobia.
2. Differentiate xenophobia from other forms of oppression.
3. Demonstrate the impact of xenophobia in the shaping of pro-war mind set.
4. Create the socio-historical context in the xenophobic consciousness evolves.

HURL 419 Genocide and Oppression

Genocidal events across time, race, technology, place, politics, legal structures, property and religion. Predictors and patterns of past and present genocidal events.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze a historical, global awareness of genocidal events through time.
2. Identify and make visible the most recent and continuing acts of genocide.
3. Evaluate the legal definitions and constraints place on social actions to address genocide.
4. Evaluate institutional and state engagement in genocide.
5. Analyze the interrelationship of concepts of race, gender, class, religious oppression, ability, and sexual orientation in the justification and implementation of genocidal actions.
6. Evaluate the means of access to media and technology in order to gain awareness and insight into the history and existence of genocidal actions.
7. Employ institutional change and pro-active strategies and effectice personal advocacy skills for addressing aspects of genocide awareness.

HURL 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

HURL 491 Change Agent Skills

Study of the theories of social empowerment and the development of practical skills for producing institutional and personal change.
Prereq.: HURL 201 or HURL 497 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Define the carrying concepts of change and change agency.
2. Synthesize the various narratives of Change Agents in the U.S. and other parts of the world.
3. Classify change agents and various concepts of change.
4. Compare the various power systems and how they impact change and change agency.
5. Define the organic features of social organizations and their impact on change work.

HURL 492 Practicum in Social Empowerment
Experiential practicum. Application of theory and research to constructive institutional and social change.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify social action projects that are consistent with their short and long range social objectives.
2. Produce a change action plan on a particular social problem of their focus.
3. Demonstrate the theoretical principles of change that inform their action plan.

HURL 497 Human Relations for Teachers I (Diversity)
Analysis of individual and institutional racism, sexism, and other forms of oppression in the school environment. A social reconstructionist model of education.
Coreq.: HURL 498 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Analyze current political, social and educational policy as it pertains to the Dominant/Subordinate dynamics associated with systems of oppression and utilize a critical multicultural/social justice educational framework to more accurately understand the norms and customs of various cultural groups in the United States.
2. "Analyze curriculum for historical inaccuracies and the presence of a dominant ""hidden curriculum"" within a critical multicultural/social justice framework. " 3. Explain how systems of oppression work and are interconnected, specific to education and schools.
4. Develop individual, community and societal plans of action to address and create change around these complex social problems.
5. Analyze their lives for a) consumption and the relationship to U.S. consumption, global consumption and climate change, b) their cultural and racial identities, c) gender socialization, d) sexism in their lives and explore how these issues impact their work, social, family and educational lives.
6. Apply alternative theoretical approaches to the topics in class from a wide range of perspectives and in as complex of a manner as possible.

HURL 498 Human Relations for Teachers II (Diversity)
Implications of racism, sexism, heterosexism, immigration issues, disability status, classism and other forms of oppression in the school setting.
Coreq.: HURL 497-597 1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify dehumanizing biases, forms of oppression, and distribution of resources and power in schools, educational experiences, and society in relation to education.
2. Critically analyze educational strategies to address social justice issues including race, gender, class, sexual orientation, ability/disability, immigration, and physical appearance in the total school environment.
3. Identify and practice educational change strategies for equity and justice in education.

Humanities (HUMS)

HUMS 250 Introduction to the Humanities
Integrating at least three humanities fields, using visual, performative, written, and analytical methods applied to a special topic.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

HUMS 491 Portfolio
Demonstration of accomplishment of interdisciplinary study in the humanities.
1 Cr. DEMAND

Information Media (IM)

IM 111 Research in the Information Age

Learning and applying information literacy skills including accessing, evaluating, organizing, and appropriately using research information.
1 Cr. Fall | Spring

Student Learning Outcomes
1. Recognize an information need, construct an effective search strategy, and locate information using appropriate sources.
2. Critically evaluate information and its sources in order to judge information reliability and accuracy, and discern its point of view, bias, and authority.
3. Categorize, synthesize, and interpret information and data, and use appropriate technologies to communicate with an intended audience.

IM 204 Research Strategies in a Changing World (Diversity)
Global context of information in relation to basic university-level research, identify, access, evaluate, and communicate information utilizing library resources, the Internet and other technologies.
3 Cr. Fall | Spring | Summer GOAL AREA 8: GLOBAL PERSPECTIVES

IM 260 Exploring Digital Media
Digital media and their impact on human expression, communication, and society. Individual and group applications for information access, communication, and creative expression. Theory and application of digital media such as electronically mediated communications, global information networks, ubiquitous and mobile learning.
3 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS

IM 302 Information Media: Theory to Practice
Theory, research and practice of the field of Information Media. Critical elements of influential theories and recent research associated with current practice in the Information Media field.
3 Cr. Fall

IM 404 Instructional Design I
Introduction to instructional design, including theoretical background, needs assessment, learner analysis and instructional strategies.
3 Cr. Fall | Summer

Student Learning Outcomes
1. Students will be able to discuss human learning and performance from a variety of perspectives (learning theories, instructional theories and models) and describe how those views explain human behaviors and performance.
2. Students will be able to foster a learning environment in which they collaborate with peers and subject matter experts.
3. Students will be able to apply systematic and systemic methods of inquiry to identify instructional problems, analyze learning conditions, and select strategies and media for learning improvement.
4. Students will be able to explain rationales for their design decisions.
5. Students will be able to design assessment and evaluation plans that align with learning goals and instructional activities.

IM 414 Technology Integration
Ways technology can help teachers and students communicate and collaborate, discussion of students as consumers, contributors, and creators in a digital age, use of technology to design authentic learning environments.
3 Cr. DEMAND

Student Learning Outcomes
1. Students will examine concepts related to technology integration.
2. Students will analyze the current research and standards on teaching and learning with technology when planning authentic learning environments and experiences for P-12 students.
3. Students will examine the significant inhibitors to the adoption of technology integration and create/design successful strategies for integrating technology to improve instruction.
4. Students will create lessons in which P-12 students can use technology to become consumers, contributors, and creators in a digital age.
5. Students will examine and apply the norms of appropriate, responsible behavior with regard to technology use (Digital citizenship).

IM 420 Information Technologies and Cultural Relevance
Explores the relationship of culture to information technologies and develops skills to assess information needs, access global information, obtain, analyze data using information technologies. Completion with a grade of "C" or better fulfills the university's upper division writing requirement.
Prereq.: IM 204 3 Cr. Spring

IM 421 Information, Technology and Learning for Elementary Education

Role of technology and media for instruction in the elementary classroom. Selecting, designing, and producing instructional materials in a variety of formats to enhance teacher productivity, student creativity, and thinking skills. Elementary education majors only.
Prereq.: Any one of the following: ART 105, CNA 169, CSCI 169, ETS 157, IM 245, IM 260, or demonstrated basic computer skills. 2 Cr. Fall | Spring

Student Learning Outcomes
1. Identify information technologies that impact student learning.
2. Systematically select and integrate effective technology, materials and strategies into the curriculum to facilitate student learning.
3. Interpret and apply ethical practices, including those related to copyright law, in the creation and use of educational materials.
4. Evaluate the outcomes of media- and technology-enhanced teaching and learning as a basis for reflecting on and revising educational practices.
5. Develop a variety of clear, accurate presentations and representations of concepts to assist learners+ understanding and to encourage critical thinking.

IM 422 Information, Technology and Learning for K-12 and 5-12 Learning

Selecting, designing, and producing instructional materials in a variety of formats. How technology assists teacher productivity and serves as a tool for enhancing student creativity and thinking skills. Education majors only.
Prereq.: Any one of the following: ART 105, CNA 169, CSCI 169, ETS 157, IM 245, IM 260, or demonstrated basic computer skills. 2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify information technologies that impact student learning.
2. Systematically, select and integrate effective technology, materials, and strategies into the curriculum to facilitate student learning.
3. Interpret and apply ethical practices, including those related to copyright law, in the creation and use of educational materials.
4. Evaluate the outcomes of media- and technology-enhanced teaching and learning as a basis for reflecting on and revising educational practices.
5. Develop a variety of clear, accurate presentations and representations of concepts to assist learners+ understanding and to encourage critical thinking.

IM 423 Information, Technology and Learning for Early Childhood Education

Role of technology and media in early childhood education. Selecting, designing, and producing instructional materials in a variety of formats. How technology assists teacher productivity and serves as a tool for enhancing student creativity and thinking skills. Child and Family Studies major only.
Prereq.: CFS 200 3 Cr. Fall | Spring

Student Learning Outcomes
1. Identify information technologies that impact early childhood education.
2. Systematically select and integrate effective technology, materials and strategies to facilitate early childhood student learning.
3. Interpret and apply ethical practices, including those related to copyright law, in the creation and use of educational materials.
4. Evaluate the outcomes of media- and technology-enhanced teaching and learning as a basis for reflecting on and revising educational practices.
5. Develop a variety of clear, accurate presentations and representations of concepts to assist early childhood learners+ understanding and to encourage critical thinking.

IM 442 Workshop: Using Microcomputers in Education

How to use a microcomputer and related software for course or classroom purposes. Will explore both generic and dedicated software packages. Course may be repeated to a maximum of 3 credits.
1 Cr. DEMAND

IM 445 Children's Literature Workshop

Participants will meet children's book authors and/or illustrators who will discuss their works for children in grades K-8. Ways of using children's literature in media centers and classrooms will be explored. One credit available upon completion of written assignment. May be repeated.
1 Cr. Summer

Student Learning Outcomes
1. Systematically select and integrate children's literature into the curriculum to facilitate student learning.
2. Interpret and apply ethical practices, including those related to copyright law, in the creation and use of children's literature.
3. Evaluate the outcomes of the use of children's

literature in the teaching - learning process as a basis for reflecting on and revising educational practice.

IM 455 Design and Preparation of Multimedia Presentations I

Design and production of instructor-led multimedia presentations. Hardware and software skills for production of presentation support materials.
Prereq.: IM 245 3 Cr. Fall | Summer

Student Learning Outcomes

1. Prepare a design document, which includes specific objectives that identify learner performance.
2. Match an instructional/informational/curriculum development need with a medium or combination of media.
3. Select and evaluate software for the design and production of instructional materials.
4. Apply the principles of multimedia design to produce presentations that are appropriate to a specific aduience and environment.

IM 456 Design and Preparation of Multimedia Presentations II

Systematic approach to the production of instructor-independent multimedia presentations for informational and self-instructional lessons. Includes needs assessment, format selection, presentation design, equipment selection and operation, and media production.
Prereq.: IM 404-504, IM 455-555 3 Cr. Fall

Student Learning Outcomes

1. Analyze a problem and determine the suitability of a multimedia solution, given the role and potential of interactive multimedia presentations for informational and instructional presentations.
2. Differentiate and select multimedia formats and technologies according to learner needs, communication potential, appearance, hardware and facilities requirements, and production parameters.
3. Systematically design and produce an interactive presentation to solve the problem.
4. Participate and demonstrate effectiveness as a member of a production team in the preparation of the finished presentation.
5. Interpret and apply the copyright laws and accessibility guidelines.

IM 461 Developing Skills for E-Learning and Communication

Skills and methodologies required for preparing learners globally for an online environment.
Prereq.: IM 260 3 Cr. Fall

IM 462 Design and Production of Video Media

Developing, designing, utilizing, evaluating, and administering video media in instructional and related programs with a focus on desktop digital technologies.
3 Cr. Spring

Student Learning Outcomes

1. Access effective uses of television in education as well as the corporate arena.
2. Produce a television show to effectively meet the educational or corporate needs.
3. Present and evaluate the completed television show.

IM 465 Information Management

Techniques and sources for gathering information for personal and professional use.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will examine concepts related to information gathering and use, particularly information from non-traditional sources.
2. Students will be able to describe and use traditional and non-traditional sources of information.
3. Students will be able to use a variety of search strategies and data mining techniques to obtain information for job and personal decision making.
4. Students will be able to select sources of information and apply that information to specific needs.

IM 486 Seminar

Conferences, reports, readings, discussions, problems, and research in a special facet of media. May be repeated to maximum of six credits.
Coreq.: 1-3 Cr. Summer

Student Learning Outcomes

1. Create a project or research study related to media or technology.
2. Develop a comprehensive list of resources that guides and supports the development and creation of a project or study.
3. Present and defend the completed project or study.

Information Systems (IS)

IS 150 Business Application Software

Spreadsheet, database, and other application software in the solution of basic business problems.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Define what a computer is and how it is used.
2. Describe a network and what it does.
3. Use an operating system to perform computer functions.
4. Use file management features for various computer functions.
5. Use features of the Internet to gather information.
6. Use word processing, spreadsheet, database and presentation graphics to solve business problems.

IS 242 Business Statistics

Business problem solving: data collection, summarizing and describing data, estimation and hypotheses testing, analysis of variance, regression analysis, time series, quality control, decision analysis. Statistical software. Tutorial.
Prereq.: MATH 115 or MATH 196 or MATH 211 (prereq.: MATH 111) or MATH 221 (prereq.: MATH 112) 4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Select and use appropriate statistical methods, including: (a) study design (b) graphical and numerical summaries (c) probability models (d) z-scores and the normal distribution (e) one- and two-sample hypothesis tests and confidence intervals (f) chi-square tests (g) simple and multiple linear regression (h) analysis of variance (i) time series analysis (j) quality control (k) decision theory
2. Correctly analyze a business problem through the application of an appropriate statistical method and the appropriate use and interpretation of statistical software.
3. Evaluate the validity of a statistical analysis of data.

IS 250 Application Program Development I

Requirement analysis, program design, design and coding standards. Translating design to programming language, testing and documentation.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the structure of a computer system and the interaction of hardware and software in it.
2. Use fundamentals of algorithms design, apply main program algorithm elements, including variables, assignment and conditional statements, work with strings, loops, functions and procedures, and arrays.
3. Use principles and building blocks of graphical user interface (GUI) to develop professional-look business applications in a visual programming environment.
4. Employ sequential file access to perform data validation and error trapping.
5. Link applications with a relational database and practice simple manipulations and queries in the code.
6. Describe basic ideas of client-server architecture and develop simple web-based applications in a simulated environment.
7. Practice basics of Object-Oriented / Event-driven programming, including objects, properties, methods and events; be able to build and use classes, inheritance, and collections.

IS 301 Information Technology in the Entrepreneurial Organization

Application of information technology to the entrepreneurial organization. Includes needs assessment, managing technology and impact analysis.
3 Cr. Fall | Spring

IS 327 Management Information Systems

Conceptual foundations of MIS, roles of computer-based IS in business including strategic and competitive uses, global and ethical issues in MIS.
3 Cr. Fall | Spring

IS 340 Management Information Systems

Conceptual foundations of MIS, roles of computer-based information systems in organizations, global and ethical issues in MIS, and business application software.
3 Cr. Fall | Spring | Summer

IS 341 Management Science

Deterministic and probabilistic modeling. Linear programming, networks, queuing, inventory models, project scheduling, simulation, and decision analysis.
Prereq.: IS 241 3 Cr. DEMAND

IS 344 Field Experience

Participation in a paid part-time position with a cooperating business, governmental, or civic organization. May be enrolled in no more than 10

additional credits. May be repeated up to 6 credits. Student must enroll in at least one on-campus class after the field experience. Permission of department.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Describe skills he/she hopes to acquire from a work experience in his/her major.
2. Evaluate work skills during work experience.
3. Summarize and evaluate his/her work assignments with respect to skills learned.
4. Analyze their experiences and present to other students in his/her major.

IS 345 Application Program Development II

Intermediate business computer programming. Interactive program design and development environments.
Prereq.: IS 250 or equivalent programming course. 3 Cr. Fall | Spring

Student Learning Outcomes
1. Use object orient programming (OOPS) techniques to create programs.
2. Identify the advantages of using OOPS techniques.
3. Develop applications in a real web environment.
4. Manipulate data stored in sequential, random files and MySQL databases.
5. Use the UNIX operating system to support a C derivitive programming environment.
6. Use programming to support business decision making.

IS 356 Systems Analysis and Design

Systematic methodologies for analyzing business problems or opportunities using structured tools/techniques.
Prereq.: IS 340, IS 250 or equivalent programming course. 3 Cr. Fall | Spring

Student Learning Outcomes
1. Students will identify information systems projects.
2. Students will organize business requirements documents and convert them into technical specifications.
3. Students will communicate effectively with various organizational stakeholders to collect information.
4. Students will design high-level logical system characteristics such as user interface.
5. Students will analyze and articulate ethical, cultural, and legal issues and their feasibilities among alternative solutions.

IS 359 Practicum in IS

Supervised application program development. Can be repeated to a maximum of 6 credits. A maximum of 3 credits can be used in the major.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IS 363 Enterprise Architecture

Design, selection, implementation and management of enterprise IT solutions. Applications and infrastructure and their fit with the business.
Prereq.: IS 250 or equivalent programming course. 3 Cr. Fall | Spring

Student Learning Outcomes
1. Students will identify variety of frameworks for enterprise architecture analysis and decision making.
2. Students will use techniques for assessing and managing risk across the portfolio of the enterprise.
3. Students will design business continuity plan.
4. Students will assess the benefits and risks of service oriented architecture.
5. Students will integrate enterprise systems with interorganizational partners such as suppliers, government, etc.

IS 365 Introduction to Human-Computer Interaction

Integration of cognitive psychology, design, information systems and others to examine human performance, IS components, methods and techniques used in design and evaluation of IS.
Prereq.: IS 356 3 Cr. Fall

Student Learning Outcomes
1. Students will design and evaluate effective computer interfaces.
2. Students will identify basic cognitive psychology issues involved in HCI.
3. Students will compare different devices used for input and output and discover issues and opportunities associated with these devices.
4. Students will interact with the software design process in order to create computer interfaces.
5. Students will evaluate a number of design techniques.

IS 371 Policy Development and Security Issues in Information Systems

Development of security policy in line with legal requirements. Risk management, security planning, contingency/disaster planning, auditing, TEMPEST compliance and on-going evaluation through the system life cycle.
Prereq.: IS 352, IS 353, CNA 397, or CSCI 310 3 Cr. Fall

Student Learning Outcomes
1. State and apply the comprehensive model of Information Assurance.
2. List several security threats within the area of information systems.
3. Apply commonly used security measures in the area of information systems.
4. Formulate a comprehensive security policy for information systems.
5. Formulate a contingency/disaster recovery policy for information systems.
6. Determine if a security policy is in line with the legal constraints.
7. Define a trusted system.
8. Apply government standards to security policy information.

IS 372 IT Security and Risk Management

Management of the security function. Risk assessment of the probability of data being compromised, design phase, and disaster recovery plan. Auditing and quantitative and qualitative analysis.
Prereq.: IS 451 or CNA 397 or IS 363 3 Cr. Spring

Student Learning Outcomes
1. Evaluate the risk management process.
2. Analyze an audit trail and identify potential security risks.
3. Apply both quantitative and qualitative risk assessment techniques to security log data.
4. Suggest or modify a security plan.
5. Use assessment and security tools in an ethical and legal manner.
6. Evaluate the purpose of the various personnel involved in the risk assessment process.
7. Identify strengths and weaknesses in contingency and disaster recovery plans.
8. Audit security policies, such as network, host, software, physical, administrative, encryption, and TEMPEST.

IS 381 Introduction to Computer Forensics

Investigating computer crime and techniques to uncover, protect, and analyze digital evidence using software and hardware tools and techniques to perform rudimentary investigations as well as consider ethical implications.
Prereq.: IS 340 3 Cr. Spring

Student Learning Outcomes
1. Describe different aspects of computer crime.
2. Identify various types of computer crimes.
3. Uncover, protect, analyze and interpret digital evidence.
4. Apply forensic software and hardware tools.
5. Perform rudimentary forensic investigations.
6. Identify stakeholders in forensic issues and our obligations to them.
7. Articulate the ethical and legal tradeoffs in a technical decision.
8. Identify ethical issues that arise in software development and determine how to address them technically and in an appropriate manner.
9. Identify the professional's role in security and the tradeoffs involved.
10. Summarize the ethical and legal bases for the right to privacy and its protection.

IS 440 Advanced Business Statistics

Applied multiple regression and correlation analysis, analysis of variance with two or more variables of classification, and multivariate techniques.
Prereq.: IS 241 3 Cr. DEMAND

IS 443 Database Design, Implementation and Administration

Entity relationship modeling, normalization, and implementation of utilizing SQL at both server and client side applications. Concurrency control methods and data security management.
Prereq.: IS 250 or equivalent programming course. 3 Cr. Fall | Spring

IS 444 Internship in Business

Participation in a full-time position as an intern-in-business with a cooperating business, governmental, or civic organization whose program has been approved in advance by the IS Department. Credits are provided upon completion of all requirements. A maximum of 3 credits can be used in the major.
Coreq.: 3-12 Cr. Fall | Spring | Summer

IS 445 Application Program Development III

Topics in business application program development. Programming languages, development techniques, and development environments.
Prereq.: IS 251 3 Cr. DEMAND

IS 446 Information Technology for Competitive Advantage
Concepts of information technology affecting the industrial environment, cost reduction, product differentiation, competitive scopes, and new products/services development.
Prereq.: IS 340 3 Cr. DEMAND

IS 450 Strategy, Management and Acquisition
IT impact on business strategy, capabilities, and value. IT leadership, function to support business, and acquisition.
Prereq.: IS 340 3 Cr. Fall | Spring

IS 451 IT Infrastructure
IT infrastructure issues such as Internet-based architecture, computer and network security, business continuity, and the role of infrastructure.
Prereq.: IS 356 3 Cr. Fall | Spring

IS 452 Unix Operating Systems Principles
Analysis and management of commands, processes and network links. Applications management. Decision-support mechanisms and log analysis. Script writing for customizing application streams.
Prereq.: IS 250 3 Cr. Fall | Spring

Student Learning Outcomes
1. List the advantages/disadvantages of the Unix operating system.
2. Effectively use the command language from the shell.
3. Manage project developing processes.
4. Analyze a Unix installation and offer improvements in regard to efficiency.
5. Set up and manage users and their associated directory/file structure.
6. Set up the network logic and address on an external interface.
7. Analyze log files and parameters for a decision support system.
8. Use the Unix operating system to optimize execution of application programs.
9. Write scripts to optimize the execution of application streams.

IS 454 Decision Support Systems
Information systems for management decision making. Decision making processes, model base development, and knowledge management. Design, implementation and evaluation of decision support systems.
Prereq.: IS 250 and IS 340, or department permission. 3 Cr. Spring

IS 455 Business Research Methodology
Planning, organizing, and executing a research project. Sampling techniques, design of experiments, interpretation and presentation of business data analysis.
Prereq.: IS 242 3 Cr. DEMAND

IS 458 IS Innovation and New Technologies
E-commerce and e-Business issues such as models, e-markets, security, social networks, e-communities, social, ethical and legal issues and emerging technologies.
Prereq.: IS 340 3 Cr. Fall

Student Learning Outcomes
1. Students will evaluate innovation and new information technology.
2. Students will identify foundational and fundamental concepts of Electronic Commerce, e-Business, and M-business.
3. Students will apply new IT concepts to real world.

IS 459 Topics in Information Systems
Recent developments in concepts, theory, practices in the analysis, design, and implementation of management information systems. May be repeated with different topics to a maximum of 9 credits.
Prereq.: IS 356 3 Cr. Fall | Spring

IS 460 Project Management
Strategies, processes, and integration techniques in the management of software development projects. Planning, staffing, scheduling, controlling, and quality assurance.
Prereq.: IS 356 3 Cr. Fall | Spring

IS 473 Operational Software Safeguards
Implementation of network security policy. Evaluation of hacker tools. Preventative measures. Monitoring attacks and analyzing logs.
Prereq.: IS 472 3 Cr. Fall

IS 483 Client/Server Security
Security problems related to client/server computing. Benchmarking client/server application in relation to virus protection, firewall configurations, authentication/encryption. Secure client/server design strategies.
Prereq.: IS 451 or IS 363 3 Cr. Spring

IS 484 Business Process Management

Concepts and strategies for improving business processes such as process design principles, challenges, organizational change, outsourcing, and inter-organizational processes.
Prereq.: IS 340 3 Cr. Fall

Student Learning Outcomes

1. Students will define business processes.
2. Students will assess business processes performance.
3. Students will design business process improvements.
4. Students will identify roles and potentials of IT to support business process management.
5. Students will design how to support business process change.
6. Students will create simple business processes and evaluate simulation results in business process analysis.

IS 485 Enterprise Systems

Theoretic and practical issues related to the application of enterprise systems within organizations.
Prereq.: IS 340 3 Cr. Spring

Student Learning Outcomes

1. Students will evaluate the costs and benefits of implementing an enterprise system.
2. Students will explain how enterprise systems integrate functional areas into one enterprisewide information system.
3. Students will describe how an organizational process often spans different functional areas.
4. Students will describe the role of enterprise systems in carrying out processes in an organization.
5. Students will explain how integrated information sharing increases organizational efficiences.
6. Students will identify, describe, and evaluate the major enterprise system software providers and their packaged systems.

IS 498 Business Consulting

Teams of students work as consultants to area businesses and non-profit organizations to diagnose and solve actual business problems. Written and oral report required.
Prereq.: IS 242 or STAT 242, ACCT 292, FIRE 371, MGMT 201, MKTG 220 or permission of department
3 Cr. Fall | Spring

International Business (INTL)

INTL 201 Observations and Reflections on England

Coreq.: 1-3 Cr. DEMAND

INTL 101 Introduction to British Cultural Experience

Coreq.: 1-3 Cr. Fall | Spring | Summer

Japanese (JPN)

JPN 101 Elementary Japanese I (Diversity)

Elementary grammar, vocabulary, writing system, and the spoken language. Must be taken in sequence.
4 Cr. Fall GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

JPN 102 Elementary Japanese II (Diversity)

Elementary grammar, vocabulary, writing system, and the spoken language. Must be taken in sequence.
Prereq.: JPN 101 4 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

JPN 201 Intermediate Japanese I

Review and expansion of basic vocabulary and grammatical structures, conversational practice, listening comprehension, written expression and reading. Students will prepare for oral and written proficiency exams during these courses. Must be taken in sequence.
Prereq.: FORL 102, JPN 102 4 Cr. Fall GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

JPN 202 Intermediate Japanese II

Review and expansion of basic vocabulary and grammatical structures, conversational practice, listening comprehension, written expression and reading. Students will prepare for oral and written proficiency exams during these courses. Must be taken in sequence.
Prereq.: FORL 201, JPN 201 4 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

Jewish Studies (JWST)

JWST 180 Anti-Semitism in America [Goal 7] (Diversity)

Anti-Semitism in America will identify Jews and Jewish life within the historical, religious identity, literary, and pop intercultural fabric of the 21st century United States.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will be able to recognize and explain the religious and cultural differences among American Jews: Reform, Orthodox, Conservative, Reconstructionist; Sephardi and Ashkenazi. Discussing the detailed historical classifications since the first Jewish refugees in 1654.
2. Students will analyze and interpret case studies of Jews engaging in examples of religious freedom, religious and social discrimination and intolerance, and institutional persecutiion from the dominant U.S. religion - Christianity. Discussing the distinction between refugee (1654 - Brazilian/Portuguese Inquisition) and immigrant (1880 - 1920 Eastern European Jews).
3. Students will be able to explain how Jews living within a dominant Protestant Christian culture have had to confront the always-present tension/stress of the dynamic continuum of assimilation, isolation, and survival stimulated by the fear of rejection and acceptance. Describe the inequality of actual power, both economic and social, between the dominant Protestant Christians and the always insignificant minority of Jews as illuminated in "Gentlemen's Agreement", "The Plot Against America", as well as very contemporary media representations: Woody Allen, Larry Dave, and Jon Stewart.
4. Students will analyze and interpret classic religious texts in order to identify the polemics that have been socially translated by American Christians until recently to marginalize Jews. Students will judge the historical necessity of interfaith relation in Minnesota, which in 1941 was called the "capitol of anti-Semitism in America".
5. Students will deconstruct and analyze the myths and idioms about Jews and Jewish life. Money - "to jew someone", power - control of the media; Christ killers/blood libel; chosen people; Zionist oppressors
6. Students will evaluate a survey of American Jews' accomplishments and then measure the risks that Jews and the Jewish community face as a public people whose number makes every accomplishment stand out. Students will compare and contrast the impossible tension located between being American Jews and Jewish Americans.
7. Students will demonstrate their critical thinking skills throughout the semester through various individual and collective assessment experiences: in-class and online D2L discussions; two (2) 3-5 page reaction essays; one (1) in-class midterm to evaluate their ability to explain, identify, and classify basic terms and concepts; one (1) take-home final.

JWST 318 Topics in Jewish Studies

Topics, issues, history, theories or philosophies of Judaism. May be repeated with different topics up to 9 credits.
3 Cr. DEMAND

Latin American Studies (LAST)

LAST 250 Introduction to Latin America (Diversity)

The Latin American experience: geography, sociology, anthropology, history, economics, political science, and literature.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

LAST 350 Minorities in Latin America (Diversity)

An investigation of the position of minorities in contemporary Latin America, principally Afro-Americans and Amerindians, utilizing a comparative and interdisciplinary approach.
3 Cr. Fall | Spring | Summer

LAST 370 Contemporary Issues in Central America

Social, economic, political, environmental, and international issues facing one or more Central American republics.
Prereq.: LAST 250 3 Cr. Spring

LAST 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Languages and Cultures (LC)

LC 101 Elementary Foreign Language I (Topical)

Elementary grammar, vocabulary and conversation in a language not typically offered. Increased

understanding and appreciation of the culture of the country where the language is spoken. Intended for students with no previous exposure in that language.
4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

LC 102 Elementary Foreign Language II

Continuation of grammar, vocabulary and conversation in a language not typically offered. Increase understanding and appreciation of the culture of the country where the language is spoken. Intended for students with LC101 or equivalent capabilities.
4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

LC 201 Intermediate Foreign Languages I (Topical)

Expansion of basic vocabulary and grammatical structures, conversational practice, listening comprehension, written expression and reading.
Prereq.: LC 102 or equivalent proficiency 4 Cr. Fall GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

LC 202 Intermediate Foreign Languages II (Topical)

Further expansion of vocabulary and grammatical structures, conversational practice, listening comprehension, written expression and reading.
Prereq.: LC 201 or equivalent proficiency 4 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

LC 250 Topical Seminar

Varying topics in culture and language. May be repeated with different topics for a total of 12 credits.
Coreq.: 1-4 Cr. DEMAND

LC 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program
Coreq.: 1-16 Cr. DEMAND

LC 445 Service Learning Experience

Students use their language skills to explore issues of language acquisition, culture/s and intercultural competence by completing service-projects in the community. Opportunities will vary depending on community needs.
Coreq.: 2-4 Cr. DEMAND GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

Student Learning Outcomes

1. Students will identify issues related to service learning and apply service learning to situations in the community via the service-learning experience.
2. Students will analyze and discuss issues related to languages, cultures and intercultural communication in readings.
3. Students will describe and reflect on (second) language acquisition patterns in reflective journals.
4. Students will describe and explain the influence of language, thought, perception and nonverbal communication of intercultural interactions in journals, discussion and presentation.
5. Students will describe and analyze cultural knowledge of various language and cultural groups in community.
6. Students will explain the effects of ethnocentrism, stereotypes, prejudice and discrimination in journals and class discussion.
7. Students will analyze the impact of social structures on lives of individuals in journals and class discussions.
8. Students will describe and explain challenges in intercultural settings, such as culture shock, and identify strategies for cultural adjustment and readjustment.

LC 453 Teaching a Foreign Language in the Secondary School

Methodologies for teaching another language. Professional development through writing of lesson and unit plans, mini-teaching demonstrations by students, and assessment of 5 modalities. Must be taken before French, German or Spanish 454-554.
Prereq.: ENGL 361, CEEP 262 (or equivalent Tchr Dev semester course), and previous or concurrent enrollment in Spanish, French, or German 451 and 452, and admission to BS foreign language major/minor. 3 Cr. Fall

LC 455 Teaching of Modern Foreign Languages in the Elementary Schools

Language acquistion theory, developmental considerations, curriculum development, and instructional strategies for second language learning by children. Must be taken before French, German or Spanish 456/556.
Prereq.: CEEP 262 (or equivalent Tchr. Dev. semester

course) or equivalent, admission to B.S. foreign language major or minor 3 Cr. Spring

LC 461 Teaching a Second Language: Theory and Methods

Emphasis on the variety of methods used in teaching a second or foreign language with special attention to oral skills.
Prereq.: ENGL 361 3 Cr. Fall

Student Learning Outcomes

1. Evaluate theories of how learners grow and develop in first and second language acquisition including similarities and differences between child, adolescent and adult language acquisition and identify how patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas. [ESL subp 3 H1, H2, WL Subp. 3 A1, A2; Subp. 6 A, B, C] 2. Identify, select, design, and prepare a variety of methods, techniques, and program models suitable for second language instruction with diverse learners including content based methodologies to meet the needs of student and to differentiate instruction where appropriate in an environment that supports individual and collaborative learning, and that encourages positive social interaction, active engagement in learning, and self-motivation. [ESL Subp 3 B1, B2, B3; WL Subp. 6 C, I] 3. Identify, select, design, prepare, assess and reflect on communicative language teaching and instruction in the second or foreign language contexts with a focus on developing communication skills in listening, speaking, reading, and writing across the curriculum. [ESL Subp 3 E1, E2, E3; WL Subp. 6 A, B, C, I] 4. Identify, select, design, and prepare instruction in the teaching of a foreign or second language that integrates an understanding of second or foreign language with the teacher's understanding of pedagogy, students, learning, classroom management, and professional development and differentiates instruction so that learners are encouraged to develop a deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways. [ESL Subp 3, J1, J2, J3, J4, J5, J6; WL Subp. 6, A, B, C, I] 5. Design and integrate instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context. [ESL Subp 3 C1, C2; WL Subp. 6 A, B, C, G, I] 6. Identify, select and plan for the use of educational technology in every aspect of instruction from planning to assessment. [ESL Subp 3 E3; WL Subp. 6 generally] 7. Develop curriculum goals and purposes based on the central concepts of language and culture and know how to apply instructional strategies and materials for achieving student understanding of the language and culture. [ESL Subp 3 I1, I2, I3; WL standard Subp. 6, C]

LC 462 Second Language Teaching Methods: Reading and Writing

Application of second language acquisition theory and methods to the teaching of reading and composition.
Prereq.: ENGL 361 3 Cr. Spring

Student Learning Outcomes

1. Adopt and adapt multiple forms of instructional approaches based on the understanding of various factors that influence the patterns of learning and development, as well as learning difference. [ESL Subp. 3 B (1), (2); WL Subp. 6, A & C] 2. Design lesson plans that reflect the interaction between content learning and language learning and support every student in meeting rigorous learning goals. [ESL Subp. 3 C(2); WL Subp. 6 A, C] 3. Develop learning tasks that promote literacy and communication skills in both spoken and written language. [ESL Subp. 3 E; WL Subp. 6 H] 4. Design assessment tools that reflect the developmental aspects of second language acquisition and its implications for content learning. [ESL Subp. 3 F, WL Subp. 6 A & C] 5. Collaborate to identify and incorporate appropriate instructional approaches to create learning environments conducive to positive social interaction and active engagements. [ESL Subp 3 B; WL Subp. 6] 6. Reflect on his/her practice to evaluate his/her instructional choices and adapt to meet the needs of each learner. [ESL Subp 3 J , WL Subp. 6, A & B] 7. Understand the impact of reading ability on student achievement in second language studies, recognize the varying reading comprehension and fluency levels represented by students, and possess the strategies to assist students to read second language content more effectively. [ESL Subp. 3, WL standard Subp. 6. H]

Library (LIB)

LIB 180 Introduction to Academic Research

Students will understand the dynamic nature of academic research, including developing a research

process, locating scholarly resources, and organizing scholarly information.
Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Identify academic expectations in relation to research in higher education; distinguish between reporting and research.
2. Generate a research question, determine what questions are appropriate for an academic setting, and translate a research question into a research strategy.
3. Select appropriate resources to support an academic inquiry, develop appropriate evaluation criteria, and communicate results of the research.
4. Identify and use an appropriate citation style and apply correct practices in quoting, citing, and paraphrasing with an awareness of intellectual property and copyright.

LIB 290 Social Media in a Global Context (Diversity)
Examines social media, its impact on global cultural evolution, and its use in research, analysis, and communication.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

Management (MGMT)

MGMT 201 Introduction to Professional Management
Survey of fundamentals of contemporary management from the perspective of the manager, the organization, its environment and their interactions.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify and/or describe the roles and functions of a manager in a modern context.
2. Identify and/or explain the interactions among a manager and the internal and external environments of an organization.
3. Analyze, discuss, describe or explain topics in ethics, social responsibility, diversity, leadership, teamwork, culture, and change management.
4. Identify and/or explain globalization and its effects on modern business management.
5. Identify and/or describe steps in the strategic management and organizational change processes.

MGMT 260 Principles of International Business
The larger context of global business, including country and cultural factors, international trade, the global monetary system, WTO, IMF, trade theory, foreign direct investment, global strategy and ethics in a global society and global economy.
3 Cr. Fall | Summer GOAL AREA 8: GLOBAL PERSPECTIVES

MGMT 261 The Big Picture: Management's Perspective
Business-related contemporary films are used to introduce, study, and analyze management issues and problems in a variety of settings.
3 Cr. Fall

MGMT 344 Field Experience
Participation in a paid part-time position with a cooperating business, governmental, or civic organization. May be enrolled in no more than 10 additional credits. Course may be repeated up to 6 credits. Maximum of 3 credits may be applied to the Management major. Student must enroll in at least one on-campus class after the field experience. Permission of department.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Describe skills he/she hopes to acquire from a work experience in his/her major.
2. Apply professional work skills during work experience.
3. Summarize and evaluate his/her work assignments with respect to skills learned.
4. Report their experiences through a presentation to other students in his/her major.

MGMT 352 Survey of Human Resource Management
The acquisition and utilization of human resources, developing desirable working relationships, and integrating the workers with organizational goals, within the contemporary legal and societal framework.
Prereq.: MGMT 201 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Explain the role of a human resource manager in a global context.
2. Evaluate employee recruitment, assessment, and selection processes.
3. Explain major Equal Employment Opportunity laws.
4. Compare and contrast employee compensation

and benefit plans.
5. Explain the techniques of training and development.

MGMT 364 Entrepreneurship-Starting your Own Business

Planning, initiating and developing a business plan which considers the problems, risks and opportunities associated with new business ventures.
3 Cr. Spring

Student Learning Outcomes

1. Identify ethical implications of the decisions they make and actions they make take.
2. Describe different leadership and motivational theories and their appropriate applications in the workplace.
3. Identify and/or describe individual difference variables, attitudes, and/or values values (e.g., personality, job satisfaction, organizational commitment) and their impact on individuals' behavior and performance in teams and organizations.

MGMT 365 Organizational Behavior

Individual and interpersonal behavior, group dynamics and structure, intergroup processes, and leadership within organizational contexts.
Prereq.: MGMT 201 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify ethical implications of the decisions they make and actions they make take.
2. Describe different leadership and motivational theories and their appropriate applications in the workplace.
3. Identify and/or describe individual difference variables, attitudes, and/or values values (e.g., personality, job satisfaction, organizational commitment) and their impact on individuals' behavior and performance in teams and organizations.

MGMT 368 Business and Society

The role of business, its interaction with the forces in its surroundings, and issues between business and society.
3 Cr. Fall

Student Learning Outcomes

1. Identify, explain, and/or describe the role of business in society and how it interacts with environmental forces.
2. Explain business terms and concepts, and effectively communicate using the language of business.
3. Identify and/or discuss current issues such as ethical and social responsibilities, diversity, teamwork, and sustainability.

MGMT 383 Operations Management

How the operations function manages people, information, technology, materials, and facilities to produce goods and services.
Prereq.: IS 242 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify, define, and/or describe the components of the operations management function in an organization.
2. Identify, define, and/or describe concepts of operational planning, execution, control, and improvement in such topics as production, capacity, materials, quality, supply chain, and services.
3. Apply problem-solving methodology in addressing operational topics covered by the instructor.

MGMT 427 International Business Management: European Perspective

Focus on both the interpersonal skills and business knowledge needed in cross cultural management. Taught only in Ingolstad, Germany.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and/or describe interpersonal skills needed in a European business setting, specifically Germany.
2. Identify and/or describe business-related knowledge essential to cross-cultural management situations.
3. Demonstrate or describe in a report their experience in actual settings.

MGMT 428 Topics in Management

Issues in management: specific topics vary with offering.
Prereq.: ETS 310, MGMT 301 3 Cr. DEMAND

Student Learning Outcomes

1. Identify main ideas and concepts of the topic including definitions, vocabulary, and terms.
2. Analyze how the issues apply to general management and assist in positioning the firm in the competitive environment that supports a sustainable

competitive advantage.
3. Distinguish between relevant and irrelevant information and valid and invalid arguments.
4. Elaborate, refine, analyze, and evaluate their own ideas in order to improve strategic decision-making abilities.
5. Respond to new and diverse perspectives.
6. Demonstrate career and life skills such as leadership and responsibility, problem-solving, productivity and accountability, and flexibility and adaptability.

MGMT 444 Internship in Business

A full-time paid position with a cooperating business, governmental, or civic organization. Three credits apply to the major program electives, balance apply to university electives. Prior approval of program required. Permission of department.
Coreq.: 3-12 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Secure a full-time internship with a business, in their major program area.
2. Apply program knowledge in the real world setting.
3. Develop and present a report on their learning experience to their instructor and/or major classes (note: this report must be more comprehensive than that required for MGMT 344).

MGMT 450 Employee Selection

Management of human resources from the labor market into and through the firm, including job analysis, predictor selection and validation, interview development, and maintaining legal defensibility.
Prereq.: MGMT 352 3 Cr. Fall

Student Learning Outcomes

1. Identify and/or describe the employee sourcing and selection process.
2. Perform a job analysis and write a job description.
3. Develop interview criteria and questions that will be legally defensible.
4. Choose and defend legally and statistically appropriate assessment tools.

MGMT 451 Employee and Labor Relations

The management of employee-employer relationships. Individual versus collective bargaining (organizing, negotiating and bargaining), dispute resolution, and alternative labor-capital conflict resolution systems in the U.S. and other countries.
Prereq.: MGMT 352 3 Cr. Fall

Student Learning Outcomes

1. Describe how and why workers organize labor unions in the U.S. private sector.
2. Describe the grievance and arbitration processes typical in unionized U.S. private sector firms and the critical ways in which they differ from typical employer-employee conflict resolution (or administration) systems in nonunion U.S. firms.
3. Describe how critical elements of the U.S. employment and labor relations systems differ from systems in several other countries that are important U.S. trading partners.
4. Identify and describe the impact of several unique environmental factors and critical events that produced the labor relations system and federal labor laws of the U.S.A.
5. Understand (from 451 to 551 in difficulty: identify, describe, articulate, compare and contrast) the underlying interests and conflicts in employee and labor relations.

MGMT 452 Employee Compensation

Compensation theories and practices, and their effect on employee recruitment, motivation, productivity, retention, satisfaction, and morale.
Prereq.: MGMT 352 3 Cr. Spring

Student Learning Outcomes

1. Recognize or identify the role and limitations of compensation in employee motivation and retention.
2. Identify legal issues in compensation and the laws and regulations relevant to these issues.
3. Analyze and interpret compensation data.
4. Identify appropriate compensation approaches for motivating various types of employees.

MGMT 453 Employee Development

Assessing training and development needs, developing and evaluating programs via empirical designs, using technology, administering contents, and selecting methods.
Prereq.: MGMT 352 3 Cr. Spring

Student Learning Outcomes

1. Conduct a training needs analysis at four levels within an organization.
2. Describe and discuss the importance of self-efficacy and social learning for an employee development program.
3. Define and discuss internal and external validity as the terms are used in HRM research.
4. List two (dis) advantages of three training

methods.
5. Calculate the ROI and a utility analysis of an employee development program.

MGMT 459 Strategic Human Resource Management

Staffing, compensation, and employee/labor relations within the firm, focusing on current and emerging topics and developing integrated policies supporting organization strategies.
Prereq.: MGMT 450, MGMT 451, MGMT 452 3 Cr. Spring

MGMT 462 Small Business Management

Management challenges, responsibilities, and rewards of operating and growing a small business.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify and/or describe the possibilities, challenges, and rewards of owning one's business.
2. Identify and/or describe the various entrepreneurial tools needed to successfully manage one's small business.
3. Discuss the implications of the application of some entrepreneurial tools or strategies via a case study or situational scenario.

MGMT 466 Strategy and Organization of Public Administration

Problems in bureaucratic organizations that arise from the political system and a non-profit orientation. Strategy formulation and decision-making in the non-business sector.
3 Cr. DEMAND

Student Learning Outcomes
1. Identify and/or describe problems (created by the political system) faced by non-profit bureaucracies and organizations.
2. Identify and/or formulate strategies to address problems faced by non-profits with regard to political issues.
3. Describe the decision-making process in non-profit organizations.
4. Explain why certain decisions and strategies have been chosen to offset the effects of political problems.

MGMT 467 Leading Organizational Change

Elements involved in planned organizational change including linkages between the external environment and organization architecture, organization development, organization design, work design, leadership, communication, organization culture, and interpersonal and group processes.
Prereq.: MGMT 201, MGMT 365 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Convey information verbally and in writing effectively.
2. Diagnose organization development needs and identify appropriate change methodologies.
3. Analyze the impact organizational culture plays in change processes.
4. Explain group processes and how teams and organizational units function.
5. Evaluate the role of leaders in organization development.

MGMT 470 International Business Management

Cultural, economic, political, social and physical environment of doing business abroad. Theories of management for effective coordination of human and material resources in international business.
Prereq.: MGMT 201 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Examine, discuss, or explain current global issues.
2. Explain basic concepts of international trade and commerce.
3. Identify values, policies and practices for successful global management 4. Identify and/or illustrate various ways a company can accomplish its global objectives.

MGMT 479 International Business Seminar

The international business environment of geo-economic-political national cooperatives; cultural factors, technology transfers, and human resource capabilities.
Prereq.: MGMT 470 3 Cr. Spring

Student Learning Outcomes
1. Identify and/or describe national cooperatives and the international business environment they face today.
2. Identify and/explain how geo-economic-political factors influence national cooperatives today.
3. Identify and/or describe cultural factors, technology transfers, and human resource capabilities that are needed or that result in international business environments by national cooperatives.

MGMT 483 Manufacturing Operations Management

Systems and sub-systems needed to achieve world-class manufacturing status. Systems examined include ERP, MRP, JIT, and DRP.
Prereq.: MGMT 383 3 Cr. Fall

Student Learning Outcomes

1. Identify and/or explain the logic of the production planning and control system and capacity considerations.
2. Identify and/or explain select inputs and outputs, and considerations of the various processes involved in MRP, ERP, DRP, JIT, and TQM.
3. Solve problems associated with topics covered in the course.

MGMT 484 Supply Chain Management

The flow of materials from the supplier to customer. Integration of functional areas such as purchasing, materials management, and distribution.
Prereq.: MGMT 383 3 Cr. Spring

Student Learning Outcomes

1. Identify and/or explain issues/topics relative to supply, operations, distribution, and integration of supply chains.
2. Identify and/or describe concepts and objectives relative to supply chains.
3. Identify and/or explain topics relative to global and domestic logistics, CRM, SRM, and ethics.
4. Solve problems relative to topics covered in the course.

MGMT 485 Service Operations Management

Design and management of service delivery systems. Operational aspects of service organizations: understanding customer satisfaction, selecting, training, and empowering employees, matching technology to strategy, defining and measuring quality, and designing facilities.
Prereq.: MGMT 383 3 Cr. Fall

Student Learning Outcomes

1. Identify and/or explore the applicability of operations management concepts to the design and management of service delivery systems.
2. Compare and contrast problems of designing, producing, and delivering services.
3. Identify the key elements of a successful service organization.
4. Show an improvement in their oral and written communication skills through assignments.

MGMT 486 Managing for Quality

Total quality management for manufacturing and service organizations: including strategic quality planning, understanding customer satisfaction, the role of human resources, benchmarking, quality costs, statistical tools and reengineering.
Prereq.: MGMT 383 3 Cr. Spring

Student Learning Outcomes

1. Identify, define, and/or describe the concepts, tools, and practices in the management of Quality.
2. Identify, conduct, and/or describe quality assessment, and quality improvement planning and implementation.
3. Identify and/or explain or discuss related topics such as strategic planning, leadership, process improvement, customer satisfaction, and supplier relations.

MGMT 497 Strategic Management

Capstone course that critically assesses global, domestic, and industry trends, organizational competency, values, and culture. Examination of stakeholders and corporate responsibility in developing strategic direction and plans of action (Open only to graduating business seniors).
Prereq.: FIRE 371, IS 340, MGMT 201, MGMT 383, MKTG 220 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Explain why corporate social responsibility, ethics, and leadership are important to organizations and the strategy process.
2. Describe a model for strategic planning.
3. Explain the role of analysis of the external and/or internal business environment on strategy formulation.

MGMT 498 Business Consulting

Teams of students work as consultants to area businesses and non-profit organizations to diagnose and solve actual business problems. Written and oral report required.
Prereq.: MGMT 201, ACCT 292, IS 242 or STAT 242, FIRE 371, MKTG 220, or permission of department. 3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the practice of business consulting.
2. Work on a local business project in the role of a consultant as an individual or in a team.
3. Write and present a professional report on the project.

Marketing (MKTG)

MKTG 100 Contemporary Business Concepts

Comprehensive examination of the major activities of business, contemporary issues, trends and challenges of the business environment in today's global and changing society.
3 Cr. Fall GOAL AREA 8: GLOBAL PERSPECTIVES

MKTG 220 Introduction to Marketing

Analysis, planning, and control of marketing functions with reference to ethical, social, political, economic, technological, and global forces.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Define, explain and use basic marketing terms and concepts.
2. Analyze the environment in which marketing management occurs, including the socio-cultural, economic, competitive, technological, and legal/political environments.
3. Explain the process of consumer and business-to-business buyer behavior and environmental influences on buyer behavior.
4. Identify the role of marketing research and marketing information systems in providing information to marketing managers.
5. Identify and interpret marketing strategies in the areas of a) market segmentation, b) positioning, c) product management, including branding, packaging, and support services, d) pricing, c) distribution, and d) advertising, public relations, sales and sales promotion and social media.
6. Identify business issues and problems in the global environment and value the importance of cross-cultural understanding in global markets.
7. Identify and give examples of professional ethical and social responsibilities to organizations and society.
8. Develop and apply skills to analyze and evaluate various components of the Marketing discipline through written projects or papers.

MKTG 321 Buyer Behavior

Consumer and organizational buying behavior; psychological, economic, and socio-cultural theories as they relate to buying decisions.
Prereq.: MKTG 220 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify the major individual, social, cultural and economic factors that influence consumers' decision making processes and motivations.
2. Explain and analyze the stages consumers go through when making consumption-related decisions.
3. Understand the way in which consumers make decisions and be able to assess the strategic implications for marketing managers.
4. Understand the implications of differences in consumer behavior in a global market and apply this understanding to strategic marketing decisions.

MKTG 322 Marketing Information and Research

Research as an aid to decision-making in marketing management; research methods: market surveys and experiments; interpreting, reporting, and using research results; competitive intelligence.
Prereq.: MKTG 220, IS 242 or STAT 242 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify uses of marketing research in assisting decision making by marketing managers and outline and explain steps involved in the marketing research process.
2. Differentiate between and explain research designs (exploratory, descriptive, and causal) as well as explain the usefulness of such research designs in providing information to evaluate marketing opportunities and solving marketing problems.
3. Describe and differentiate between secondary data and primary data, identify sources of secondary data, and demonstrate the ability to evaluate secondary data that could assist decision making by marketing managers.
4. Describe some qualitative and quantitative data collection techniques, and understand their advantages and disadvantages, as well as their application.
5. Develop a rudimentary survey instrument as well as evaluate such instruments.
6. Perform initial analyses of survey data, summarize information in tables/charts/graphs, and interpret such information objectively.
7. Integrate marketing information obtained via analyses in a clear, objective and succinct marketing research report.

MKTG 333 Business Communication Strategies

Advanced business report writing; analysis and interpretation of business communications.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Define communication and describe the main purpose for communication in business.
2. Explain the objective of the communication process.
3. Identify factors affecting group and team communications and discuss aspects of effective meeting management.
4. Write effective persuasive requests and persuasive messages within an organization.
5. Identify the purpose of the message and the appropriate channel.
6. Apply techniques for adapting messages to the audience, including strategies for communicating ethically and responsibly.
7. Select and apply the appropriate message outline (deductive or inductive) for developing messages to achieve the desired response.
8. Apply techniques for developing effective sentences and unified and coherent paragraphs.
9. Prepare visually appealing documents that grab the receiver's attention and increase comprehension.
10. Revise and proofread a message for content, organization, and style; mechanics; and format and layout.

MKTG 344 Field Experience

Participation in a paid part-time position with a cooperating business, governmental, or civic organization. May be enrolled in no more than 10 additional credits. Course may be repeated, but a maximum of 3 credits may apply as electives in the major program. Student must return to campus for at least one semester after the Field Experience and be enrolled in at least one on-campus class. Permission of department.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Describe skills he/she hopes to acquire from a work experience in his/her major.
2. Apply professional work skills during work experience.
3. Summarize, analyze and evaluate his/her work assignments with respect to skills learned.
4. Report their experiences through a presentation to other students in his/her major.

MKTG 402 Product and Price Management

Product and price management in marketing decision-making; new product development; product/brand management: pricing policies.
Prereq.: MKTG 220 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Describe and explain the new product development process.
2. Apply the various tools of the new product development process to develop new product ideas as well as make sound marketing appraisals about which ideas to bring to market.
3. Identify and understand how to solve the strategic issues behind launching and designing their own new product.
4. Develop a creative marketing viewpoint when it comes to branding and products.
5. Identify, explain and assess the issues and apply appropriate tactics in the area of pricing and price management.

MKTG 403 Principles of Promotion

Principles of advertising, sales promotion, personal selling, and direct marketing.
Prereq.: MKTG 220, MKTG 321, MKTG 322 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Develop and formulate marketing strategy using real world client.
2. Demonstrate an understanding of how to connect marketing strategy decisions to marketing tactics tools (e.g., using marketing strategy outcomes to determine the selection of tactical tools such as advertising and sales promotions).
3. Prepare and present an Integrated Marketing Communication plan using real world clients.
4. Integrate traditional and contemporary marketing communication tools when designing an integrated marketing communication plan.
5. Evaluate the global implications of Integrated Marketing Communication topics.

MKTG 404 Distribution Management

Movement of products and services from producer to consumer; channels of distribution; logistics. Successful completion of this course satisfies the Upper Division Writing Requirement.
Prereq.: MKTG 220 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Demonstrate an ability to take a multi-faceted view of different marketing decisions, i.e., product and brand, pricing, promotions and distribution (placing) and how they are interlinked in the efficient

and effective movement of products and services from the producer to the consumer.
2. Exhibit an understanding of how distribution decisions need to be continuously adapted to changes in the micro and macro environments in which businesses operate.
3. Demonstrate an understanding of the importance of adapting distribution strategies and managing distribution channels to support evolving marketing mix decisions.

MKTG 411 Retail Management

Strategic retail management decisions regarding pricing, promotion, merchandising, site location, store planning and design, and personnel.
Prereq.: MKTG 220 3 Cr. Fall

Student Learning Outcomes

1. Describe the impact the retailing industry has on the US and global economy, and become familiar with the many careers retailing offers.
2. Identify the different types of retailers and analyze the retailing functions across diverse retail formats.
3. Describe the scope of retailing activities involved in the retailing industry and apply appropriate strategies for these activities through cases and experiential exercises.
4. Use industry specific terminology to communicate retailing activities.
5. Apply various strategies used by retailers to address the many challenges facing retailers today.

MKTG 412 Retail Merchandising

Buying and selling in retail management: merchandise assortment planning, fashion merchandising; retail buying; preparing and pricing merchandise for resale.
Prereq.: MKTG 220, MKTG 411 3 Cr. DEMAND

MKTG 413 Business Marketing Management

Business-to-business marketing; organizational buyer behavior and management strategies.
Prereq.: MKTG 320 3 Cr. Summer

Student Learning Outcomes

1. Understand business-to-business markets from the perspectives of the business marketing environment, business marketing strategies and key theoretical concepts.
2. Demonstrate knowledge and understanding of business marketing theories and theoretical frameworks in the development of business marketing strategies.
3. Apply theoretical and conceptual models to real life cases, e.g., using appropriate theories and frameworks to critically evaluate business markets and managerial decision-making.

MKTG 414 Promotion Management

Promotion policies and practices in campaign planning, media selection, client-agency relationships, research and testing; creation of a promotional campaign.
Prereq.: MKTG 320, MKTG 403 3 Cr. Spring

Student Learning Outcomes

1. Demonstrate a knowledge and understanding of the concepts, methods, and effects of different promotional techniques.
2. Identify and apply the managerial, social, legal, and ethical considerations involved in the promotional planning process.
3. Identify and critically evaluate diverse promotional methods, techniques and applications.

MKTG 415 Professional Selling

Personal selling from an analytical and decision-making perspective.
Prereq.: MKTG 220 3 Cr. Fall | Spring | Summer

MKTG 416 Global Marketing Strategy

The importance of global marketing to the U.S. economy; problems, opportunities and practices of managing multinational marketing activities; characteristics and structure of international markets.
Prereq.: MKTG 220 3 Cr. Fall | Spring

Student Learning Outcomes

1. Understand the basic terms and concepts involved in marketing internationally (I.e. adaptation, standardization, entry strategies).
2. Examine the elements of the business environment (economic, political/legal, and cultural) in international markets and write a situation analysis as part of marketing decision making or planning for international markets.
3. Develop skill in identifying and evaluating marketing strategy involving market development across geographic borders: a) targeting and positioning; b) product management, including branding, packaging, support services and pricing; c) distribution and sales; and d) advertising and promotion.
4. Identify and select appropriate entry strategies for

international markets.
5. Develop problem solving skills from the perspective of the global marketing manager.

MKTG 417 Global Promotional Strategy

Promotional strategies in the international marketplace, including advertising, personal selling, and sales promotion.
Prereq.: MKTG 320, MKTG 403 3 Cr. DEMAND

MKTG 418 International Business Seminar

Problems faced by international businesses; policy and decision-making processes in the global environment.
Prereq.: MKTG 320 and MKTG 416; MGMT 470 3 Cr. DEMAND

Student Learning Outcomes
1. Understand the impact of international business and the implications of a global economy.
2. Identify and critically analyze and synthesize global issues and concerns.
3. Develop and express their perspectives regarding the theoretical foundation of international trade, ethical and social issues as well as cultural, political, and legal issues.
4. Understand and communicate their views regarding the importance of international business strategy and the areas of marketing, financial management, human resource management, and organizational structure and control.

MKTG 419 Marketing of Services

Marketing profit and non-profit services. Differences between services and physical goods. Internal and external marketing issues.
Prereq.: MKTG 220 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Recognize and explain similarities and differences involved in marketing products and services.
2. Understand, critique and compare tools used by managers to design innovative service strategies and apply those tools to service contexts.
3. "Practice the use of a ""customer orientation"" in the design and implementation of service marketing activities. " 4. Understand and evaluate the effectiveness of internal marketing in organizations.
5. Define the role of employee in service activities and develop ways to assess their performance.

MKTG 420 Electronic Marketing

Identifying marketing opportunities on the Internet; creating on-line marketing programs; electronic advertising, retailing and commerce.
Prereq.: MKTG 220 3 Cr. Fall | Spring

Student Learning Outcomes
1. Define and relate key core marketing concepts to an e-commerce context.
2. Learn to describe and identify marketing opportunities, including advantages and disadvantages, regarding using the Internet for promotions, distribution and retailing.
3. To prepare an on-line marketing program and roll-out plan for a given website.
4. Compare and combine website design tools and techniques using core marketing concepts as the framework for successful website design.
5. Describe and relate e-commerce success factors to real world situations.

MKTG 425 Seminar in Sales Management

Activities involved in managing a sales force; sales manager's decision-making with respect to formulation, implementation, and evaluation of sales programs; case emphasis.
Prereq.: MKTG 220 Coreq.: MKTG 415 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate a fundamental understanding of the current relevance, roles, and objectives of sales force management.
2. Identify, analyze, interpret information, and make primary decisions related to sales program formulation + sales force size, quota development, territory design, sales force size and sales force composition.
3. Identify variables that influence sales force performance and interpret facts provided to determine elementary reasons for sales performance levels.
4. Define variables that influence sales force motivation and evaluate facts provided to discern basic reasons for sales force motivation levels.
5. Demonstrate fundamental knowledge of processes and issues involved in (a) recruitment, selection, and training of salespeople, and (b) development of sales force compensation plans.
6. Evaluate available information and make essential decisions regarding (a) training needs of salespeople, and (b) sales force compensation plans.
7. Demonstrate knowledge of, and apply sales related information in a rudimentary evaluation of sales force performance.

8. Demonstrate knowledge of, and apply sales related information in an elementary evaluation of sales force profitability.

MKTG 426 Professional Selling Specialization

Training and techniques in professional selling arena.
Prereq.: MKTG 220, MKTG 333, MKTG 415 3 Cr. DEMAND

Student Learning Outcomes

1. Identify common professional selling problems and apply appropriate sales management skills to develop suitable solutions to these problems.
2. Identify common sales management problems and apply appropriate sales management skills to develop suitable solutions to these problems.
3. Communicate and facilitate effectively in writing, speaking, and presenting to groups and individuals by applying appropriate selling skills in international settings/scenarios.
4. Apply appropriate social media technologies and theories as applied to professional selling and sales management projects/scenarios.

MKTG 427 International Marketing

Exploration of how global marketing and international trade can help firms meet customer demand, reduce costs, and provide valuable information on potential markets around the world. Taught in Ingolstadt, Germany.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate an understanding of the global market environment and its application in an in-depth industry specific global analysis.
2. Evaluate and select a foreign market and appropriate market entry strategy encompassing choice of target market and all product mix decisions.
3. Identify and apply public business information and international data sources to conduct advanced product/company and international/global market information search.

MKTG 428 Marketing/General Business Seminar

Issues in marketing or general business: Specific topics selected for each offering.
Prereq.: MKTG 320 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate a knowledge and understanding of seminar related topics.
2. Demonstrate an ability to apply seminar related materials and topics in the critical evaluation and analysis of related cases.

MKTG 429 Marketing Strategies

Marketing strategy development and decision-making. Open only to Marketing majors.
Prereq.: MKTG 321, MKTG 322 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and implement the fundamentals of the marketing function in organizations.
2. Evaluate the social, legal, political and ethical concerns in marketing.
3. Demonstrate an understanding of the marketing function in a competitive and dynamic global business environment.
4. Develop effective strategic and marketing analysis skills.
5. Demonstrate computer-based skills and activities, written and oral communication, and information analysis.

MKTG 444 Internship

Participation in a full-time paid position with a cooperating business, governmental, or civic organization whose program has been approved in advance by the department in which the student has an approved major. Credits are provided upon completion of all reqirements, of which 3 credits apply as electives in the major program and any additional credits apply as university electives for graduation. Permission of department.
Coreq.: 3-12 Cr. Fall | Spring | Summer

MKTG 498 Business Consulting

Teams of students work as consultants to area businesses and non-profit organizations to diagnose and solve actual business problems. Written and oral presentation required.
Prereq.: MKTG 220; ACCT 292; IS 242 or STAT 242; FIRE 371; MGMT 201 or permission of department 3 Cr. Fall | Spring

Student Learning Outcomes

1. Working in teams, evaluate a real-world consulting project for a small business or economic development organization. Students on each team will: a. define the problem, b. design a proposal to address the problem, c. gather data relevant to the situation, d. gather and analyze industry data, and e. formulate recommendations.
2. Present the findings and recommendations both

in writing and in an oral presentation.
3. Prepare a professional consulting report that is presented to the client.

Mass Communications (MCOM)

MCOM 146 American Television and Cultural Diversity (Diversity)

The relationship between TV and society focusing on how American TV treats society's various cultures.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

Student Learning Outcomes

1. Demonstrate awareness of the scope and variety of works in the arts and humanities.
2. Understand those works as expressions of individual and human values within an historical and social context.
3. Respond critically to works in the arts and humanities.
4. Engage in the creative process or interpretive performance.
5. Articulate an informed personal reaction to works in the arts and humanities.

MCOM 200 Introduction to Mass Communication

History, nature, functions and criticisms of mass media and their role in society.
3 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS

Student Learning Outcomes

1. Demonstrate awareness of the scope and variety of works in the arts and humanities.
2. Understand those works as expressions of individual and human values within an historical and social context.
3. Engage in the creative process or interpretive performance.

MCOM 203 Introduction to Mass Media Writing

Writing in styles and formats used in journalism, broadcasting, multimedia, and strategic communications.
Prereq.: MCOM 200 Coreq.: Cr. Fall | Spring

Student Learning Outcomes

1. Write clearly and concisely in various media contexts.
2. Identify, explain and demonstrate what constitutes a professional news media story.
3. Identify, obtain and evaluate credible and diverse sources of information.
4. Research stories for various media platforms and audiences.

MCOM 207 Introduction to Mass Media Technology

Various forms of multimedia and their applications to the mass communications industry.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify and apply appropriate building blocks of Web design.
2. Effectively operate digital still and video cameras, editing software, and other media technologies and apply the concepts of visual grammar to the writing, shooting, and editing of effective news stories for broadcast radio, TV, and online delivery.
3. Communicate effectively in writing, orally, and visually.
4. Describe how multimedia communications affect cultures and societies.
5. Apply ethical principles to professional multimedia practices.
6. Apply multimedia concepts, standards, and practices to professional fields of communication.

MCOM 260 Introduction to Strategic Communications

Essential theories and principles of public relations and advertising. Overview of public relations and advertising practices and uses in the management of business, government, institutions and organizations.
Prereq.: MCOM 200 Coreq.: Cr. Fall | Spring

Student Learning Outcomes

1. Identify and discuss the theory and practice of integrated communication in contemporary business, government and nonprofit markets.
2. Identify and discuss the ethical issues related to various strategic communications situations
3. Critique and analyze the strategic communication strategies of an organization 4. Critique the strengths and limitations of various communication tools and media 5. Work effectively as a member of a collaborative team 6. Effectively communicate ideas, analysis and arguments through written and verbal presentations

MCOM 275 Documentaries of the Holocaust (Diversity)

Study, criticism and analysis of the Holocaust documentary from a historical and analytical basis. 3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MCOM 300 Mass Media Law

First Amendment foundation, broadcast regulation, commercial speech and copyright in historical and contemporary contexts.
Prereq.: MCOM 200 3 Cr. Fall | Spring

Student Learning Outcomes

1. Exhibit enhanced analytical thinking through use of past and anticipated media law problems, readings, and essays as they relate to the field of journalism.
2. Address potential legal problems in journalism, analyze copyright laws, and research broadcast and print regulation.
3. Analyze research tools and explore how to use organizational assistance for coping with media laws as journalists; research and analyze the law as it pertains to journalism.
4. Discuss and analyze the First Amendment and its freedom of the press implications.
5. Research state and federal journalism laws.

MCOM 315 Introduction to Radio and Vocal Performance

Operations and organization of the radio industry with hands-on training with radio equipment and audio production software. Vocal performance techniques for radio and television.
Prereq.: MCOM 207 or permission of the instructor.
Coreq.: Cr. Fall

Student Learning Outcomes

1. Explain and discuss radio studio operations
2. Evaluate and discuss radio industry organization and business 3. Practice multitrack audio production techniques 4. Practice and apply vocal techniques and performance for TV and radio 5. Practice radio automation operation and voice-tracking techniques using appropriate software

MCOM 320 Introduction to Television and Multimedia Production

Television and multimedia production practices and techniques, including hands-on training of various equipment and software applications to create multiple projects.
Coreq.: MCOM 200 and MCOM 207, or Permission of instructor Cr. Fall | Spring

Student Learning Outcomes

1. Utilize media specific research and storytelling techniques in the production of live broadcasts and features for TV and Web 2. Describe the theories and skills of television production, in particular the three phases of production and the implementation of these processes from start to finish 3. Employ advanced lighting techniques for professional results 4. Utilize advanced camera operation techniques such as shot composition, motion, and movement 5. Create scripts that demonstrate television writing techniques such as logging, storyboarding, and script writing for features 6. Use advanced non-linear editing techniques to create broadcast quality packages and programs

MCOM 325 Remote Multimedia Production

Studio and location production. Editing of news and public affairs programming.
Prereq.: MCOM 200 and MCOM 207 and MCOM 320, or permission of instructor. 4 Cr. Fall | Spring

MCOM 330 Multimedia Storytelling

Theory, principles and hands-on practice of multimedia storytelling in Mass Communications.
Prereq.: MCOM 200 and MCOM 203 and MCOM 207. 3 Cr. Fall | Spring

Student Learning Outcomes

1. Research and analyze the theories, concepts, and social influences of new media production applications created by the convergence of computers and traditional media.
2. Apply the concepts and practical skills of Web design.
3. Apply the concepts and practical skills of animated graphics.
4. Analyze the concepts and fundamentals of media interactivity.
5. Examine the concepts, practical applications, and social influences of new media.
6. Explore social networking and mobile communications.

MCOM 335 Motion Graphics and Video Effects

Principles, methods, and techniques of advanced digital video editing.
3 Cr. Spring

Student Learning Outcomes

1. Evaluate visual design methods.
2. Analyze video editing aesthetics.
3. Use and assess different non-linear editing

systems.
4. Analyze video editing techniques.
5. Evaluate multiple visual special effects and their place in the editing process.
6. Apply advanced video and audio editing techniques.

MCOM 338 Multimedia Documentary Production

Documentary conventions through analysis, research, and hands-on practice.
Prereq.: MCOM 200 and MCOM 207 and MCOM 320, or permission of the instructor Coreq.: Cr. Fall | Spring

Student Learning Outcomes

1. Distinguish among the various conventions associated with documentaries.
2. Critique and analyze documentary techniques and form 3. Plan and design documentary projects through pitches, treatments, scripts, storyboards, etc. as a practice of creating and writing documentaries.
4. Capture images, sound, and edit to produce compelling documentary projects.
5. Work effectively as a member of a collaborative team

MCOM 340 Introduction to Multimedia Journalism

Writing and reporting of various features and hard-news journalism pieces for multimedia platforms. Hands-on experience with campus media outlets.
Prereq.: MCOM 200 and MCOM 203 and MCOM 207 Coreq.: Cr. Fall | Spring

Student Learning Outcomes

1. Appraise the news value of potential story ideas to employ good news judgment 2. Write and edit original feature and hard-news multimedia stories for a campus media outlet 3. Demonstrate appropriate news gathering and interviewing skills 4. Defend ethical decisions made during the newsgathering process 5. Communicate information to diverse cultures with a sensitivity to attitudes held by races, religions, and political and social groups that are not their own

MCOM 345 Visual Storytelling in Journalism

Principles and techniques of visual storytelling and photojournalism with hands-on practice.
Prereq.: MCOM 200 and MCOM 203 and MCOM 340, or permission of the instructor Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Create news long- and short-form pieces using visual and text-based storytelling elements for online and print campus outlets.
2. Use applicable software applications for video, photo, print, and online design.
3. Distinguish among different kinds of visual journalism stories and the tools used for their creation.
4. Capture images, audio, and sound, and edit them to create compelling journalism stories.
5. Identify the characteristics and components of a good visual news story.
6. Defend ethical decisions made during the newsgathering and presentation process.

MCOM 350 Multimedia Newswriting and Producing

Experience in producing, news writing, assignment editing, and news crew supervision. Lab. Prereq.: MCOM 200 and MCOM 203 and MCOM 207 and MCOM 340, or permission of instructor. 4 Cr. F, S.
Prereq.: MCOM 200 and MCOM 203 and MCOM 207 and MCOM 340, or permission of instructor. 4 Cr. Fall | Spring

MCOM 360 Strategic Communications Research

Advertising and public relations research methods. Quantitative and qualitative research methods. Data analysis for strategic communication situations.
Prereq.: MCOM 200 and MCOM 260 3 Cr. Fall | Spring

MCOM 365 Strategic Communications Layout and Design

Layout, design and editing of projects in advertising and public relations settings. Hands-on skills for layout and design assignments and projects.
Prereq.: MCOM 200, MCOM 207 or permission of instructor. 3 Cr. Fall | Spring

Student Learning Outcomes

1. Develop and enhance design/layout skills.
2. Understand basic design terms and be able to apply basic concepts of typography.
3. Gain a basic understanding of scanning, photo manipulation, and copy fitting.

MCOM 370 Social Media Communications

Developing and implementing a social media strategy for private, governmental and nonprofit organizations and measuring its effectiveness. Ethical considerations and new technologies and

tactics in social media.
Prereq.: MCOM 220 and MCOM 260, or permission of the instructor Coreq.: Cr. Fall | Spring

Student Learning Outcomes
1. Describe the practices and expectations of a social media marketer 2. Critique and explain social media's role within an organization's communications strategies 3. Operate social media strategies in an ethical manner 4. Use various media tools in a social media context in a professional manner 5. Develop a social media strategy and connect it to broader goals for a client

MCOM 375 Writing for Strategic Communications

Development of professional-level writing skills for strategic communications professionals. Using different storytelling approaches for particular audiences and media.
Prereq.: MCOM 200 and MCOM 203 and MCOM 260. Coreq.: Cr. Fall | Spring

Student Learning Outcomes
1. Write clearly and persuasively in forms and styles appropriate for different audiences and purposes 2. Describe issues related to diversity and ethics through created and discussed content 3. Work effectively as a member of a collaborative team 4. Plan, research and write strategic communications materials such as articles, newsletters, fliers, brochures, social media messages and advertising copy.
5. Identify and evaluate the role that storytelling and messaging plays in an organization's broader strategic communication strategy.

MCOM 380 Media Strategy and Planning

Strategies and techniques required to effectively plan, select and buy advertising messages in the mass media.
Prereq.: MCOM 200 and MCOM 260. Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Use effective measurement techniques for assessing the efficiency of media buys 2. Identify and use appropriate terms and jargon in the field of media planning 3. Evaluate and create media plans 4. Identify and explain the role and importance of media planning in a broader communications strategy

MCOM 385 Strategic Communications Advanced Creatives

Creative elements of advertising copywriting, research, layout and design, and development of creative advertising messages in strategic communications settings.
Prereq.: MCOM 200 and MCOM 207 and MCOM 365 or instructor permission. 3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate appropriate research methodologies and data interpretation in determining an assigned product's competitive environment, target audience, single-minded proposition with its substantiation, and desired brand image through the creation of a creative brief.
2. Demonstrate the ability to successfully integrate the creative brief into multiple campaign-based creative executions in print and broadcast media, as well as demonstrate an advanced understanding of the marriage of copy and visual as appropriate to print, broadcast, and online media.
3. Demonstrate the ability to successfully integrate the creative brief into multiple campaign-based creative executions in new media (performance/ambient/social), as well as demonstrate an understanding of both the individualized nature of various new media vehicles and their synergistic possibilities.

MCOM 400 Ethics, Media Impact and Society

Ethical issues confronting the field of Mass Communications and the impact and functions of the mass media in a diverse society.
Prereq.: MCOM 200 Coreq.: Cr. Fall | Spring

Student Learning Outcomes
1. Describe and discuss the economic structure and political economy of mass media in a consumer society 2. Critically analyze effects of media professionals in shaping culture, the economy and politics 3. Critically analyze the role of diversity in shaping society, democracy and mass media
4. Define, apply and synthesize key theories in mass communication 5. Identify and critically analyze ethical problems in mass communications in a systematic way

MCOM 414 Special Topics in Mass Communications

Lecture, readings, research and discussions on selected topics. Majors/minors only. Junior/senior standing. 1-3 Cr. May be repeated with different

topics. Maximum 6 Cr.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Effectively operate the tools and technology of the seminar/practicum's particular field of media.
2. Apply concepts, standards, and skills learned in the seminar/practicum to their professional career in their chosen area of media.
3. Think critically, creatively, and collaboratively and write correctly and clearly.

MCOM 415 Advanced Audio Production

Production of educational and commercial radio programs. Broadcast theory. Multi-channel applications.
Prereq.: MCOM 207 and MCOM 315 or permission of the instructor 4 Cr. Spring

Student Learning Outcomes
1. Research and analyze the theory and principles of digital audio production.
2. Research and analyze the various digital formats.
3. Survey the various platforms of digital audio production.
4. Identify and employ digital audio production techniques.
5. Produce digital audio productions.

MCOM 420 Studio TV Production

Studio and field television production, planning, producing and editing. Creative, technical, aesthetic principles, strategies and processes.
Prereq.: MCOM 200 and MCOM 207 and MCOM 320, or permission of instructor 4 Cr. Fall

Student Learning Outcomes
1. Research the theory and principles of television production.
2. Analyze various forms of television production writing.
3. Write scripts for television programs.
4. Analyze and employ television camera and editing techniques.
5. Produce and direct television programs.

MCOM 440 Broadcast and Online Journalism Reporting

Writing and reporting news and sports video-based stories for broadcast and online. Hands-on practice with campus media outlets.
Prereq.: MCOM 200 and MCOM 203 and MCOM 207 and MCOM 340 Coreq.: Cr. Spring

Student Learning Outcomes
1. Produce, write, shoot and edit basic news stories appropriate for broadcast or online delivery
2. Generate original story ideas appropriate for use on campus media outlets 3. Communicate information to diverse groups (e.g., racial, gender, cultural, religious, political, social) with a sensitivity to their beliefs, attitudes and value systems
4. Defend ethical decisions made during the newsgathering and presentation process 5. Work effectively as part of a collaborative team 6. Practice basic announcing and performance skills appropriate for the broadcast media

MCOM 444 Internship in Mass Communications

Department approved and directed field experience with approved mass media agency. Learning contract required. May repeat up to 3 credits.
Prereq.: MCOM 200 Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Effectively operate the tools and technology of the internship's particular field of media.
2. Apply concepts, standards, and skills learned in the internship to their professional career in their chosen area of media.
3. Think critically, creatively, and collaboratively and write correctly and clearly.

MCOM 480 Strategic Cases and Campaigns in Advertising

Case-study analysis of advertising strategies and practice in contemporary society. Students develop a comprehensive advertising campaign for a real-world client.
Prereq.: MCOM 200 and MCOM 260 and MCOM 360
Coreq.: Cr. Fall | Spring

Student Learning Outcomes
1. Use relevant consumer, market, product and competitive research in an advertising campaign
2. Identify and apply knowledge of market segmentation, target marketing and brand positioning in the advertising process 3. Analyze and evaluate the role that legacy and digital media play in the advertising process.
4. Implement strategies and techniques for real-world campaigns 5. Apply case-analysis methodology to various advertising contexts 6. Work effectively as a member of a collaborative team 7. Effectively communicate ideas, analysis and argument through written reports and verbal presentations.

MCOM 485 Strategic Cases and Campaigns in Public Relations

Case-study analysis of public relations strategies and practice in contemporary society. Students develop a comprehensive public relations campaign for a real-world client.
Prereq.: MCOM 200, MCOM 260, MCOM 360
Coreq.: Cr. Fall | Spring

Student Learning Outcomes

1. Use relevant research to develop goals and measure success in a public relations campaign 2. Evaluate communication strategies facing organizations and design customer consumer-focused solutions.
3. Implement public relations strategies and techniques in a real-world campaign 4. Apply case-analysis methodology to various advertising contexts 5. Work effectively as a member of a collaborative team 6. Effectively communicate ideas, analysis and argument through written reports and verbal presentations

MCOM 495 Capstone

Team-produced projects in real-world media settings and situations, including journalism, radio, television and strategic communications projects.
Prereq.: Senior standing. Coreq.: Cr. Fall | Spring

Student Learning Outcomes

1. Work effectively as a member of a collaborative team 2. Write stories and reports that are appropriate for radio, TV, print or strategic communications to serve diverse audiences and markets 3. Use effective interviewing and research skills to generate ideas and facts appropriate for mass communications storytelling and situations 4. Evaluate the importance of diversity and inclusiveness and the representation of diverse voices and groups 5. Use appropriate media technology to help in the telling and delivery of stories 6. Critically evaluate communication challenges facing a news outlet or client and be able to propose ethical solutions

MCOM 498 Professional Portfolio

Creation of a mass media portfolio appropriate for the mass media professions. Strategies for job hunting and long-term career success.
Prereq.: Senior standing and Mass Comm majors only Coreq.: Cr. Fall | Spring

Student Learning Outcomes

1. Design a basic strategy for long-term career development 2. Assemble a portfolio and resume that demonstrates the student's knowledge and abilities in his or her chosen field 3. Identify job-hunting techniques and be able to discuss how to find an entry-level job in the field of mass communications 4. Identify and discuss concepts in how to build a personal brand through social media and other venues

Mathematics Education (MTHE)

MTHE 441 Teaching Calculus in the Secondary School

Fundamental concepts of calculus aligned with methods of teaching and learning those concepts. Emphasizing the role of discovery method through real-world applications of calculus. Use of technology to develop calculus concepts. Calculus concepts through various forms of proof.
Prereq.: MATH 222, MATH 271 3 Cr. Odd Fall

Student Learning Outcomes

1. identify the roots of calculus in algebra and geometry, and how calculus was invented; 2. apply concepts of calculus to solve problems in physics, natural sciences, and economics; 3. identify the theory behind calculus, through which, they will be exposed to the most rigorous and accurate human endeavor; 4. practice how to motivate high school students through real-world problems; 5. analyze the development of calculus concepts through word problems and the use of technology; 6. identify the role of empirical approach toward conjecture, counterexample, and proof; 7. discuss different aspects of proof: logical/symbolic, computer, and picture.

Mathematics (MATH)

MATH 105 Cultural Mathematics

Topics selected by the instructor to demonstrate the nature of mathematics.
3 Cr. DEMAND

MATH 111 Technical Mathematics

Applications of linear and quadratic functions, systems of equations, exponential and logarithmic functions and trigonometric functions. No more than 5 credits from MATH 111, 112, 113, and MATH 115 may be counted toward graduation.

Prereq.: MATH 072, or high school advanced algebra with satisfactory math placement score. 3 Cr. DEMAND

MATH 112 College Algebra

Functions and graphs; polynomial, radical, rational, exponential, logarithmic functions; equations, inequalities, systems of equations; applications. No more than 6 credits from MATH 112, 113, and MATH 115 may be counted toward graduation.
Prereq.: MATH 072 or high school advanced algebra with a satisfactory math placement score. 3 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

MATH 113 Trigonometry

Trigonometric functions and their graphs; inverse trigonometric functions; trigonometric identities, equations, trigonometric applications, polar coordinates. No more than 6 credits from MATH 112, 113, and MATH 115 may be counted toward graduation.
Prereq.: MATH 112, or high school pre-calculus with satisfactory math placement score. 3 Cr. Fall | Spring GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

Student Learning Outcomes

1. Students demonstrate knowledge of the six trigonometric functions, methods of solving triangles, trigonometric identities, and trigonometric equations.
2. Students model problems using their knowledge of these functions, and construct the quantitative solutions to many geometric problems.
3. Students apply their knowledge of trigonometric functions and identities to construct quantitative solutions in geography, physical sciences, engineering, and other disciplines.
4. Students communicate their knowledge of functions, equations, and inequalities, both orally (i.e. class discussions) and in writing (i.e. written assessments).

MATH 115 Precalculus

Functions and their graphs; polynomial, rational, radical, logarithmic, trigonometric and inverse trigonometric functions; algebraic and trigonometric equations and inequalities, identities, systems of equations, applications. No more than 6 credits from MATH 112, 113, and MATH 115 may be counted toward graduation.
Prereq.: MATH 072 or high school advanced algebra with a satisfactory math placement score. 5 Cr. Fall | Spring GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

MATH 170 Mind Over Math

A math course for the non-mathematician. Knowledge and tools to develop non-routine problem solving skills and to reduce math avoidance. 1 Cr. DEMAND

MATH 171 Fundamentals of Mathematics

Mathematics as a problem solving tool. Concepts of sets, logic, induction, combinatorics, numeration, recursion, trees, graph theory, and matrices.
Prereq.: MATH 072, or high school advanced algebra with satisfactory math placement score 3 Cr. DEMAND

Student Learning Outcomes

1. Generate a truth table for at least 5 different sets of propositional statements (and, or, not, if-then, if-and-only-if).
2. Convert informal English expressions to and from formal quantified logical expressions.
3. Discriminate between valid and invalid arguments.
4. Identify the union, intersection, and complements of at least 3 simple sets.
5. Prove that one set is a subset of, or is equal to, another set.
6. Prove a stated algebraic relation using any of the following techniques, with 100% accuracy: direct proof, indirect proof, contradiction, mathematical induction.
7. Identify different components of a graph (e.g. vertex, edge, loop, parallel edges, isolated vertex).
8. Determine when two graphs are isomorphic.
9. Create and apply algorithms to solve Euler path and circuit problems, shortest-path problems, and minimal spanning tree problems.
10. Describe the historical development of discrete mathematics including contributions from diverse cultures.

MATH 193 Mathematical Thinking

Development of problem solving and decision making strategies using mathematical tools from arithmetic, algebra, geometry, probability, and statistics. Skills to communicate and defend solutions and decisions.
Prereq.: MATH 070 or high school advanced algebra with a satisfactory math placement score. 3 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

MATH 196 Finite Mathematics

Functions (linear, quadratic, exponential, and logarithmic), simple and compound interest, annuities, linear programming, and probability. Mathematical modeling and applications.
Prereq.: MATH 072 or high school advanced algebra with a satisfactory math placement score. 3 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

MATH 201 Elements of Mathematics I

Nature of mathematics from a problem solving approach using sets, relations, number systems, discrete mathematics, and basic algebra.
Prereq.: MATH 072 or high school advanced algebra with satisfactory math placement score. 3 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

MATH 211 Survey of Calculus I

Ideas and concepts of calculus. Topics from differential and integral calculus of one variable. Applications to business, life sciences, economics, and other disciplines.
Prereq.: MATH 111, MATH 112, MATH 115, MATH 196 or satisfactory math placement score 3 Cr. Fall | Spring GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

MATH 212 Survey of Calculus II

Differentiation and integration of trigonometric functions, integration techniques and applications, three-dimensional analytic geometry, multivariable calculus, differential equations.
Prereq.: MATH 211 3 Cr. Spring

Student Learning Outcomes

1. Evaluate definite integrals and antiderivatives by using a variety of techniques of integration including substitution, integration by parts, and partial fractions.
2. Differentiate and integrate functions that are the product, quotient, and composition of trigonometric and inverse trigonometric functions with other functions.
3. Approximate solutions using numerical techniques including the Newton-Raphson Method, Euler's Method, and numerical integration techniques.
4. Set up and solve applications of the definite integral including finding volumes of solids and calculating work and hydrostatic force.
5. Calculate partial derivatives of functions of several variables and interpret the results.
6. Find extrema of functions of several variables using the Second Derivative Test, the Extreme Value Theorem (extended to functions of two variables), and Lagrange Multipliers.
7. Set up and evaluate double integrals to find the volume under a surface and above the x-y plane.
8. Derive Taylor Polynomials and Maclaurin Series for variations of familiar functions.
9. Sketch solutions to the differential equation for various initial values (given a slope field).
10. Solve first-order, separable differential equations with and without initial values.

MATH 221 Calculus I

Limits, continuity, differentiation, applications of derivatives, integration. Prereq.: 115, or 112 and 113, or high school advanced algebra and trigonometry with a satisfactory math placement score. 4 Cr. F, S, SUM.
Prereq.: MATH 115, or MATH 112 and MATH 113, or high school advanced algebra and trigonometry with a satisfactory math placement score. 4 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

MATH 222 Calculus II

Integration techniques and applications, inverse functions, topics in analytic geometry, sequences and series, improper integrals, plane curves.
Prereq.: MATH 221 4 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

MATH 252 Mathematical Problem Solving with MATLAB

Use of MATLAB, a mathematical computing and programming environment, to simulate, model and solve mathematically based problems.
Prereq.: MATH 222 3 Cr. Fall

Student Learning Outcomes

1. Create MATLAB code to demonstrate basic knowledge of arrays and array operations, relational and logical operators, and their use in branching statements and loops.
2. Analyze algorithms to solve mathematically based problems and design MATLAB code to efficiently implement these algorithms.
3. Analyze examples that illustrate issues related to numerical computation, including floating point representation of numbers, floating point arithmetic, and roundoff error.
4. Use MATLAB's random number generators to

solve problems involving modeling, simulation, and probability.
5. Use MATLAB to expand their knowledge of Precalculus and Calculus topics such as sequences and series, Taylor polynomials, numerical differentiation and integration, and root-finding techniques such as the Bisection Method and Newton's Method.
6. Create recursive functions in MATLAB to explore the concept of self-similarity and generate fractals such as the Sierpinski Triangle and the Koch Snowflake.

MATH 271 Discrete Mathematics

Formal logic, sets, relations, functions, introduction to number theory and graph theory, basic counting principle, discrete probability, applications.
Prereq.: MATH 113 or MATH 115 3 Cr. Fall | Spring

Student Learning Outcomes

1. Use logic connectives and negations effectively and correctly, and gain exposure to the use of quantifiers.
2. Construct truth tables and determine logical equivalences.
3. Perform set operations, use them and the Venn diagram method in applications.
4. Use definitions of relations and functions, and give their graph representations.
5. Apply elementary number theory to represent numbers in different bases, and solve problems in crypotography.
6. Model physical situations using graphs and apply elementary graph theory to find solutions.
7. Apply basic counting principles to solve problems in discrete probability and other problems involving counting.
8. Communicate concepts both orally and in well-written sentences and explain solutions to problems.

MATH 301 Elements of Mathematics II

Continuation of MATH 201, including sequences and growth, algebraic concepts, informal geometry and measurement, statistics, and probability.
Prereq.: MATH 201 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Demonstrate a sound mathematical background, especially in the areas of algebra, geometry, measurement, statistics, and probability.
2. Use problem solving as an integral part of mathematics.
3. Exhibit and value a positive attitude toward mathematics.
4. Read and understand mathematics independently.
5. Communicate mathematics clearly and accurately in oral and written form.
6. Demonstrate an ability to analyze and model mathematical concepts.
7. Demonstrate an understanding of mathematics and the connections between mathematical concepts themselves as well as connections to other disciplines.

MATH 304 Tools of Mathematical Reasoning

Proof techniques; induction, valid arguments, quantifiers; sets and transfinite cardinalities; review of number theory; injective and surjective functions, equivalence relations, partial orders, Boolean algebras; mathematical folklore. A transition to upper-level courses, with the primary emphasis on reasoning and proof.
Prereq.: MATH 221, MATH 271 Coreq.: 3.0 Cr. Fall | Spring

MATH 312 Linear Algebra

Matrices, matrix operations, systems of linear equations, determinants, geometry of R-n, vector spaces, subspaces, linear transformations, inner products, eigenvalues.
Prereq.: MATH 211 or MATH 221 4 Cr. Fall | Spring

Student Learning Outcomes

1. Perform elementary row operations on matrices; determine and analyze solutions of a system of linear equations.
2. Perform matrix arithmetic, calculate determinants, and determine inverses to given matrices.
3. Identify Euclidean spaces and subspaces and other vector spaces.
4. Identify spans and spanning sets.
5. Distinguish between linearly dependent and linearly independent sets of vectors.
6. Identify bases and dimensions of vector spaces.
7. Calculate characteristic polynomials, eigenvalues and eigenvectors, and diagonalize matrices.
8. Identify and calculate with orthogonal vectors, orthogonal bases, and orthonormal bases.
9. Orthogonally diagonalize symmetric matrices.

MATH 320 Multivariable Calculus for Engineers

Vectors, functions of several variables, gradients, multiple integrals, applications.
Prereq.: MATH 222 3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze functions of several variable and interpret their properties in various contexts.
2. Perform vector operations and recognize their applications.
3. Describe and visualize 3D lines, curves, planes, and fundamental surfaces and analyze geometrical properties of each.
4. Determine extrema of functions of several variables.
5. Model a written description of a physical situation graphically, numerically, analytically, or verbally using vectors, curves, surfaces, derivatives, and integrals in rectangular, polar, cylindrical, and spherical coordinate systems in R^2 and R^3.
6. Illustrate multivariable concepts by hand and with appropriate technology.
7. Use technology to help solve problems and illustrate solutions.
8. Communicate concepts both orally and in well-written sentences and explain solutions to problems.

MATH 321 Vector and Multivariable Calculus

Vectors, functions of several variables, gradients, multiple integrals, vector fields, Green's & Stokes' theorems, applications.
Prereq.: MATH 222 4 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze functions of several variables and interpret their properties in various contexts.
2. Perform vector operations and recognize their applications.
3. Describe and visualize 3D lines, curves, planes, and fundamental surfaces and analyze geometrical properties of each.
4. Determine extrema of functions of several variables.
5. Depict and interpret vector fields and compute curl, divergence, and flux.
6. Model a written description of a physical situation graphically, numerically, analytically, or verbally using vectors, curves, surfaces, derivatives, and integrals in rectangular, polar, cylindrical, and spherical coordinate systems in R^2 and R^3.
7. State the Fundamental Theorem of Line Integrals, Green's Theorem, Stoke's Theorem, and the Divergence Theorem in their own words.
8. Compare and contrast several generalizations of the Fundamental Theorem of Calculus.
9. Illustrate multivariable concepts by hand and with appropriate technology.
10. Use technology to help solve problems and illustrate solutions.

MATH 325 Differential Equations

Separable and first-order linear equations, second-order linear equations having constant coefficient, applications, systems of linear ODE's with constant coefficients, nonhomogenous linear systems, Laplace transforms.
Prereq.: MATH 222, MATH 312 3 Cr. DEMAND

Student Learning Outcomes

1. Recognize various types of differential equations and execute an appropriate method to arrive at an analytical or approximate solution.
2. Solve systems of linear first-order differential equations.
3. Use Laplace transforms to solve differential equations.
4. Apply appropriate technology to analyze differential equations.
5. Communicate quantitative ideas clearly and accurately.

MATH 327 Differential Equations with Linear Algebra

Matrices and matrix operations, Gaussian elimination, determinants, Euclidean n-space and subspaces, dependence, eigenvalues, eigenvectors, diagonalization. Separable and first-order linear equations, second-order linear equations having constant coefficients, applications, systems of linear ODE's with constant coefficients, nonhomogenous linear systems, Laplace transforms.
Prereq.: MATH 222 4 Cr. Fall | Spring

Student Learning Outcomes

1. Perform elementary row operations on matrices; determine and analyze solutions of a system of linear equations.
2. Perform matrix arithmetic, calculate determinants, and determine inverses to given matrices.
3. Compute the eigenvalues and eigenvectors of a matrix and diagonalize matrices.
4. Identify Euclidean spaces and subspaces.
5. Distinguish between dependent and linearly independent sets of vectors.
6. Recognize various types of differential equations and execute an appropriate method to arrive at an analytical or approximate solution.
7. Solve systems of linear first-order differential equations.

8. Use Laplace transforms to solve differential equations.
9. Apply appropriate technology to analyze differential equations.
10. Communicate quantitative ideas clearly and accurately.

MATH 336 Data Analysis and Probability for K-8 Teachers

Data collection and organization; measures of central tendency and variance; inferences and convincing arguments; subjective, theoretical, experimental, and conditional probability; simulation; counting principles; mathematical expectation. Techniques, technology, and current trends in the teaching and learning of data analysis and probability.
Prereq.: MATH 112, MATH 171, MATH 330 3 Cr. DEMAND

Student Learning Outcomes

1. Organize and summarize data in order to read and interpret graphs.
2. Describe data numerically using measures of center, position, spread, and equations.
3. Compute and interpret probabilities using empirical and theoretical methods.
4. Apply rules of probability to discrete and continuous distributions.
5. Produce data through sampling and experiments.
6. Apply rules of statistical inference to draw conclusions about populations.

MATH 337 Geometry for K-8 Teachers

Geometric concepts, spatial visualization, spatial reasoning, justification, and proof. Techniques, technology, and current trends in the teaching and learning of geometry.
Prereq.: MATH 112, MATH 171 or MATH 211, and MATH 330 3 Cr. DEMAND

Student Learning Outcomes

1. Analyze characteristics and properties of two-dimensional and three-dimensional shapes.
2. Verify properties of geometric figures by making logical arguments using Formal Synthetic Euclidean Geometry and Coordinate Geometry.
3. Use informal geometry, Formal Synthetic Euclidean Geometry, coordinate geometry, transformational geometry and straight-edge and compass to solve applied problems involving geometric figures.

MATH 353 Operations Research Models

Construction and solution of mathematical models associated with operations research.
Prereq.: MATH 222 3 Cr. Odd Spring

Student Learning Outcomes

1. Formulate mathematical models from word problems.
2. Transform linear programming models into standard form linear programs which can be solved by the Simplex Method or Revised Simplex Method.
3. Construct dual linear programs of primal linear programs and use the dual programs to solve and/or analyze the primal linear program 4. Formulate and solve a number of classical linear programming problems such as transportation problems, assignment problems and network flow problems while taking advantage of the special structure of these problems.
5. Formulate and solve integer programming models.

MATH 411 Modern Algebra I

Groups, subgroups, cyclic groups, permutation groups, isomorphisms, Cayley's theorem, cosets, LaGrange's theorem, normal subgroups, quotient groups, homomorphisms, the first isomorphism theorem, construction of the integers and rational numbers from the natural numbers, rings, integral domains, and fields.
Prereq.: MATH 304 and MATH 312, or consent of instructor 4 Cr. Fall

MATH 412 Modern Algebra II

Ideals, factor rings, ring homomorphisms, polynomial rings, factorization of polynomials, irreducible polynomials, Euclidean domains, introduction to fields, extension fields, splitting fields, algebraic and transcendental numbers, geometric construction.
Prereq.: MATH 411 3 Cr. DEMAND

Student Learning Outcomes

1. Describe examples of rings and fields with various combinations of properties.
2. Describe mathematical structures that serve as counterexamples to supposed assertions in ring and field theory.
3. Use concepts and notation of the course in an abstract sense appropriate to their definitions rather than relying on preconceived notions.
4. Perform calculations with cosets, factor rings, general polynomial rings, Eisenstein's Criterion, field extensions, and Galois groups.

5. State famous and 'named' theorems of ring theory and field theory (such as the Fundamental Theorem of Field Theory).
6. Apply known results, concepts, and techniques of group theory, ring theory, and field theory to investigate new situations and prove other results.
7. Reason mathematically and correctly.
8. Describe applications of ring theory and field theory in various fields (such as the Advanced Encryption Standard and the unsolvability of the quintic).
9. Describe the proper historical and conceptual contexts of the concepts of ring theory and field theory.

MATH 421 Real Analysis I

The real number system, completeness of the real numbers, topology of the real numbers, sequences, limits, continuity, differentiation, and integration.
Prereq.: MATH 222, MATH 304 Coreq.: 4.0 Cr. Spring

MATH 422 Introduction to Real Analysis II

Series, power series, uniform and pointwise convergence, Reimann integration, and applications.
Prereq.: MATH 421 3 Cr. DEMAND

Student Learning Outcomes

1. Determine whether statements involving series, limits, and integrals are true or false and prove their conclusions through correct and rigorous mathematical arguments.
2. State, interpret, and justify clear and unambiguous mathematical statements (placing a particular emphasis on quantifiers).
3. Use basic proof techniques (e.g. induction, contradiction).
4. Apply advanced techniques for analyzing convergence and evaluating limits.
5. Define and evaluate various notions of integral.

MATH 423 Complex Variables

The complex field, the theory of analytic functions, power series. Fundamental theorem of algebra.
Prereq.: MATH 320 or MATH 321 3 Cr. Odd Spring

Student Learning Outcomes

1. Perform basic algebraic operations using various representations of the complex number system.
2. Prove simple facts about the topology of the complex number system and functions of a single complex variable.
3. Compare and contrast functions of a real variable and functions of a complex variable.
4. Identify and differentiate analytic functions.
5. Find harmonic functions that solve classical applied problems in mathematics.
6. Define complex generalizations of the definite integral of a function of a real variable.
7. Compute contour integrals.
8. State the Cauchy Integral Formula and Liouville's Theorem.
9. Compute the Taylor and Laurent expansions of simple functions, determining the nature of the singularities, regions of convergence, and calculating residues 10. Use the Cauchy Residue Theorem to evaluate integrals.

MATH 427 Partial Differential Equations

Partial differential equations of mathematical physics, boundary value problems, classical solution methods, Bessel functions.
Prereq.: MATH 320 or MATH 321, MATH 325 or MATH 327 3 Cr. Odd Fall

Student Learning Outcomes

1. Derive, classify, and apply basic solution techniques to solve parabolic (diffusion equation), elliptic (Laplace equation), and hyperbolic (wave equation) PDEs analytically and numerically.
2. Formulate PDEs to model real-life phenomena.

MATH 428 Introduction to Probability Models

Probability theory, random variables, Markov chains, Poisson process, queueing theory.
Prereq.: MATH 222 3 Cr. DEMAND

Student Learning Outcomes

1. Identify sample spaces and events in given problems.
2. Calculate probabilities of events by using simple counting techniques, discrete distributions (binomial, hypergeometric, Possion), and continuous distributions (normal, exponential, gamma, Weibull).
3. Apply tree diagrams, the law of total probability, and Bayes+s Theorem to calculate conditional probabilities.
4. Analyze a given external situation by doing each of the following: define relevant random variables for the situation, identify relevant aspects of the situation, choose a type of probability distribution appropriate to the aspects identified, and construct a probabilistic model for the situation using available data and the chosen type of probability distribution.
5. Construct and use Markov chains to analyze stochastic processes with stationary transition probabilities.

6. Derive probability distributions by using the Poisson process.
7. Construct probabilistic models and equilibrium distributions for problems in queueing theory.

MATH 431 Professional Subject Matter for Middle Grades Mathematics

For teacher candidates only. Number sense, patterns and functions, number theory, geometry, data analysis and probability, current curriculum and pedagogical developments, lesson planning, and microteaching. Should be taken within one year prior to student teaching.
Prereq.: Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission, and one of MATH 304, MATH 312, MATH 321, or MATH 325 Coreq.: STEM 420, ED 431, IM 422 3 Cr. Fall

Student Learning Outcomes

1. Apply problem solving strategies within the context of middle grade mathematics.
2. Frame and present mathematical problems, both orally and in written form.
3. Take and defend a written position on an issue relevant to mathematics education.
4. Make connections between and within mathematical strands including computation and estimation, number sense, statistics, probability, algebra, measurement, and geometry.
5. Demonstrate conceptual understanding of mathematics by modeling with manipulatives and/or technology.
6. Transform their knowledge of pedagogy and mathematics into a form that is accessible to middle grades students as demonstrated by lesson and unit planning, and microteaching.

MATH 432 Professional Subject Matter for Secondary School Mathematics

For teacher candidates only. Algebra, geometry, data analysis, and advanced topics; current curriculum and pedagogical developments, lesson planning, and microteaching. Should be taken within one year prior to student teaching.
Prereq.: Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission, and one 400-level mathematics course. Coreq.: STEM 421, ED 451, ED 421 4 Cr. Spring

Student Learning Outcomes

1. Apply problem solving strategies to solve and pose problems within the context of secondary school mathematics.
2. Critically examine the following five principles: Equity, curriculum, teaching, learning, assessment, and technology.
3. Adopt and defend in writing a position on an issue relevant to mathematics education.
4. Make connections between and within mathematical strands including number and operations, algebra, geometry, measurement, data analysis, problem solving, reasoning and proof, communication, connections, and representation.
5. Demonstrate conceptual understanding of mathematics by modeling with manipulatives and technology.
6. Transform their pedagogical and mathematical content knowledge into a form that is accessible to secondary school students as demonstrated by lesson and unit planning, and microteaching.

MATH 433 Algebra for Elementary and Middle School Teachers

Algebraic concepts, representations, structures and applications.
Prereq.: MATH 330 3 Cr. DEMAND

Student Learning Outcomes

1. Explain and apply concepts of variable and function.
2. Represent and analyze mathematical situations and structures using algebraic symbols.
3. Model and solve contextualized problems using various representations [i.e., graph, table, equation, real-world context, language].
4. Identify and describe relationships among quantities - both quantitative and qualitative.
5. Analyze and formulate mathematical models through the use of ratio and proportion to solve real-world problems.

MATH 435 Teaching Problem Solving in Elementary School Mathematics

Problem solving strategies, teaching problem solving, problem solving via concrete materials, cooperative learning. For elementary education majors only.
Prereq.: MATH 330 3 Cr. DEMAND

Student Learning Outcomes

1. Apply problem solving strategies to solve problems within the context of elementary school mathematics.
2. Apply problem solving strategies to pose problems within the context of elementary school

mathematics.
3. Use technology to solve problems in elementary school mathematics.
4. Use manipulatives to solve problems in elementary school mathematics.
5. Evaluate a recent journal article dealing with problem solving in elementary school mathematics.
6. Design a problem solving program that can be implemented in the elementary school.

MATH 439 Using Technology to Teach Science and Mathematics, K-8

Demonstrating and exploring technology, such as computers and calculators, that enhances mathematics and science learning and instruction in the K-8 curriculum. Lab activities that involve collecting, representing, and analyzing data.
Prereq.: MATH 330 3 Cr. DEMAND

Student Learning Outcomes

1. Critically examine the Technology Principle described in the Principles and Standards for School Mathematics.
2. Expand their knowledge of current technology.
3. Review journal articles describing how technology can be incorporated into the teaching and learning of science in the elementary school classroom.
4. Review journal articles describing how technology can be incorporated into the teaching and learning of mathematics in the elementary school classroom.
5. Design lesson plans that incorporate technology in the elementary school science classroom.

MATH 440 Theoretical Problem Solving

Mathematical problem solving, including calculus, differential equations, linear algebra, and proof techniques. Preparation for math competitions. Must be currently enrolled in or have completed 273, 312, 325, or permission of instructor.
1 Cr. DEMAND

MATH 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Find an appropriate application of mathematical principles that is useful in one or more industrial or educational settings.
2. Provide satisfactory job performance under the supervision of a team manager with the applied setting.
3. Consult and advise effectively with other workers with less mathematical training in such settings.

MATH 452 Numerical Analysis

Round-off error and computer arithmetic. Solutions of equations in one variable. Interpolation and polynomial approximation. Numerical integration and differentiation. Error Analysis.
Prereq.: MATH 222, MATH 252 or permission of instructor 3 Cr. Even Spring

Student Learning Outcomes

1. Implement and apply existing or self-designed numerical algorithms to solve problems related to: finding solutions of equations in one variable, approximating derivatives, approximating definite integrals, and constructing curve fitting models such as polynomial and piecewise polynomial interpolants.
2. Analyze and compare numerical algorithms in terms of accuracy, efficiency, stability, and/or convergence.

MATH 453 Numerical Linear Algebra

Direct and iterative solutions in linear algebra. Orthogonal polynomials, splines and least squares approximations. Error analysis.
Prereq.: MATH 222, MATH 312, MATH 252 or CSCI 201 3 Cr. DEMAND

Student Learning Outcomes

1. Implement and apply numerical algorithms to solve linear systems of equations directly by using Gaussian Elimination with various pivoting strategies and matrix factorizations, and indirectly by using iterative techniques.
2. Derive and apply algorithms for finding discrete least squares approximations and continuous least squares approximations.
3. Analyze and compare numerical algorithms in terms of accuracy, efficiency, stability, and/or convergence.

MATH 455 Mathematical Modeling

Derivation and analysis of mathematical models using differential equations to describe real-world phenomena. Graphical and numerical solution techniques. Nonlinear differential equations and stability.

Prereq.: MATH 327 or (MATH 312 and MATH 325) 3 Cr. Even Fall

MATH 465 Elements of Geometry

Axiomatic systems, foundations of Euclidean geometry, plane Euclidean geometry, and non-Euclidean and transformational geometries.
Prereq.: High school geometry, MATH 304, MATH 312 3 Cr. Spring

Student Learning Outcomes

1. Solve problems and write proofs in Euclidean geometry based on axioms and basic theorems, and design geometric constructions utilizing straightedge and compass as well as the software Geometer's Sketchpad.
2. Read about the development of geometry and how this development is related to other fields of mathematics, and analyze the structures of axiomatic systems.
3. Solve problems in geometry analytically (utilizing Cartesian coordinates).
4. Propose and justify theorems in hyperbolic geometry, illustrate with models the geometric objects and their properties in hyperbolic geometry and elliptic geometry.
5. Reveal and use general properties of Euclidean plane transformations and special properties of Euclidean plane isometries and affine transformations using synthetic and algebraic methods. Solve geometric problems using transformations.

MATH 480 Topics in Mathematics

Designed for intensive study in a special topic in pure or applied mathematics. Topic will be announced in class schedule. Approval of instructor required for enrollment. May be repeated to maximum of 6 credits.
3 Cr. DEMAND

Student Learning Outcomes

1. Read, write, listen to, and speak mathematics with understanding: that is; use the methods of proof to justify results, apply the methods of the course to solve, problems and answer questions in appropriate situations, state the definitions of the basic concepts of the course, state the main theorems of the course, and reproduce outlines of the proofs of the main theorems and results of the course.
2. Describe examples that illustrate the results or techniques of the course.
3. Perform calculations using the concepts of the course.
4. Reason mathematically to solve problems and use a generalized problem solving process for various situations.
5. Describe the proper historical, conceptual, and foundational contexts of the concepts studied.

MATH 482 Student Teaching Seminar

For teacher candidates only. Reflections of and extensions of the student teaching experience in a seminar format; individual classroom observations. Must be taken concurrently with student teaching. S/U grading option only.
2 Cr. Fall | Spring

Student Learning Outcomes

1. Speak on their student teaching experiences during oral group discussions at weekly meetings.
2. Describe their student teaching experiences by keeping a journal and submitting this regularly to the content supervisor.
3. Speak with departmental faculty in critically reflection of the teacher education program.
4. Integrate content knowledge with pedagogical understanding to assure all students learn and perform at acceptable levels.
5. Write and speak in the language of mathematics.
6. Integrate an understanding of mathematics with an understanding of teaching.

MATH 483 Topics in Elementary School Mathematics

In depth study of a special topic in mathematics relevant to the elementary school curriculum.
Prereq.: MATH 330 3 Cr. DEMAND

Student Learning Outcomes

1. Read, write, listen to, and speak mathematics with understanding: Use the methods of proof to justify results. Use the methods of the course to be applied. State definitions of the basic concepts of the course. State the main theorems of the course.
2. Perform calculations using the concepts of the course.
3. Describe examples that illustrate the results or techniques of the course.
4. Describe the proper historical, conceptual, and foundational contexts of the concepts studied.
5. Reason mathematically to solve problems and a generalized problem solving process to work word problems and model real-world situations.
6. Use appropriate technology to enhance their

mathematical thinking and understanding, solve mathematical problems, and judge the reasonableness of their results.

MATH 485 Mathematics Seminar

Readings, discussion of, and preparation of professional papers in mathematics. Satisfies the upper-division writing requirement (UDWR) for BA mathematics majors.
Prereq.: One 400-level mathematics course. 2 Cr. Fall

Mechanical and Manufacturing Engineering (MME)

MME 201 Thermodynamics and Heat Conduction

First and second laws of thermodynamics; thermodynamic properties of gases, vapors, and gas-vapor mixtures; energy-systems analysis including power cycles, vapor and gas cycles, fundamentals of heat conduction; numerical methods.
Prereq.: PHYS 234, CHEM 210, MATH 327 or (MATH 325 and MATH 312) 4 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and calculate properties of real and ideal gases.
2. Identify and calculate real and ideal process and illustrate them on thermodynamic diagrams.
3. Apply the first law of thermodynamics to open and closed systems, quantifying work, heat, and system energy.
4. Apply the second law of thermodynamics calculating entropy and efficiency for open and closed systems.
5. Calculate conduction and diffusion for various one dimensional systems.

MME 202 Supplement - Thermodynamics and Heat Conduction

Supplemental course allows students to continue their major courses while completing modular instruction in the fields of thermodynamics and heat conduction.
Prereq.: PHYS 234, CHEM 210, MATH 327 or (MATH 325 and MATH 312) Coreq.: 1-2 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and calculate properties of real and ideal gases.
2. Identify and calculate real and ideal process and illustrate them on thermodynamic diagrams.
3. Apply the first law of thermodynamics to open and closed systems, quantifying work, heat, and system energy.
4. Apply the second law of thermodynamics calculating entropy and efficiency for open and closed systems.
5. Calculate conduction and diffusion for various one dimensional systems.

MME 211 Materials and Structures

Classification of materials, micro-structures, and associated mechanical behavior with techniques for alterations. Mechanical design involving stresses, strengths, deflections of engineering components.
Prereq.: CHEM 210, PHYS 234 Coreq.: MME 243 or MME 244 4 Cr. Fall | Spring

Student Learning Outcomes

1. Describe how/why a material's microstructure influences its mechanical behavior.
2. Specify the methods used to modify a material's microstructure.
3. Perform various calculations related to microstructure/property relationships.
4. Exploit the differences between metal, polymer, and ceramic materials.
5. Perform various microstructural assessment techniques.
6. Assess loads for the purposes of mechanical design.
7. Determine the levels of stress, strain, and deflection of mechanical components.
8. Select materials and/or modify geometries to achieve successful mechanical components and products, including the application of safety factors.

MME 212 Supplement - Materials and Structures

Supplemental course allows students to continue their major courses while completing modular instruction in the fields of materials and structures.
Prereq.: CHEM 210, PHYS 234, or approval of instructor Coreq.: 1-2 Cr. Fall | Spring

Student Learning Outcomes

1. Understand how/why a material's microstructure influences its mechanical behavior.
2. Specify the methods used to modify a material's microstructure.
3. Perform various calculations related to microstructure/property relationships.
4. Exploit the differences between metal, polymer, and ceramic materials.
5. Perform various microstructural assessment techniques.

6. Assess loads for the purposes of mechanical design.
7. Determine the levels of stress, strain, and deflection of mechanical components.
8. Select materials and/or modify geometries to achieve successful mechanical components and products, including the application of safety factors.

MME 221 Introduction to Mechanical Design

Integrated engineering design for students transferring into manufacturing engineering who have had most of the engineering content of a required course but lack the associated design content. Design content in the curriculum is required by EAC/ABET.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Communicate using graphical methods.
2. Specify dimensions for assemblies.
3. Generate components for design.

MME 224 Engineering Design Graphics

The graphic language of engineering and computer-aided design. Application of engineering graphics to mechanical design using software tools. Theories and practices of computer-aided design. Geometric dimensioning and tolerancing. Projects.
Prereq.: MATH 115 or (MATH 112 and MATH 113) or MATH 221 4 Cr. Fall | Spring

Student Learning Outcomes

1. Draw freehand sketches of objects following engineering sketch principles.
2. Create multiview, auxiliary view and section view drawings of objects.
3. Read and create basic and geometric tolerance features.
4. Interpret and create working drawings for manufacturing.
5. Use SolidWorks to create part, assembly and drawings electronically.
6. Carry out comprehensive solid modeling of given mechanical components.
7. Geometric tolerancing for gauging and design.

MME 225 Supplement - Engineering Design Graphics

Supplemental course allows students to continue their major courses while completing modular instruction in the fields of engineering graphics and/or geometric dimensioning and tolerancing.
Prereq.: MATH 115 or (MATH 112 and MATH 113) or MATH 221 Coreq.: 1-2 Cr. Fall | Spring

Student Learning Outcomes

1. Draw freehand sketches of objects following engineering sketch principles.
2. Create multiview, auxiliary view and section view drawings of objects.
3. Read and create basic and geometric tolerance features.
4. Interpret and create working drawings for manufacturing.
5. Use SolidWorks to create part, assembly and drawings electronically.
6. Carry out comprehensive solid modeling of given mechanical components.
7. Geometric tolerancing for gauging and design.

MME 243 Statics and Dynamics

Principles of Newtonian mechanics, Forces, Moments, Equivalent force-couple systems, Resultants, Equilibrium, Structures, Distributed forces, Area and mass moment of inertia, Friction, Particle and rigid body kinematics, Force-mass-acceleration relations, Virtual work, Potential and Kinetic energy, Impulse and momentum.
Prereq.: PHYS 234, MATH 222 (or concurrent) 4 Cr. Fall | Spring

Student Learning Outcomes

1. Draw correct free body diagrams and write the related static and dynamic equations.
2. Solve the equilibrium of rigid bodies and interconnected rigid bodies (trusses, frames and machines) 3. Compute moment of inertia of areas and mass moment inertia of rigid bodies.
4. Analyze the external and internal effects created by concentrated and distributed forces.
5. Solve particle and rigid body kinematics problems.
6. Apply work and potential and kinetic energy and momentum principles to particles and rigid bodies.
7. Setup and solve rigid body static equilibrium, kinematic and dynamic problems by using engineering software tools.

MME 244 Supplement - Statics and Dynamics

Supplemental course allows students to continue their major courses while completing modular instruction in the fields of statics and/or dynamics.
Prereq.: PHYS 234, MATH 222 (or concurrent)
Coreq.: 1-2 Cr. Fall | Spring

Student Learning Outcomes

1. Draw correct free body diagrams and write the related static and dynamic equations.
2. Solve the equilibrium of rigid bodies and interconnected rigid bodies (trusses, frames and machines).
3. Compute moment of inertia of areas and mass moment inertia of rigid bodies.
4. Analyze the external and internal effects created by concentrated and distributed forces.
5. Solve particle and rigid body kinematics problems.
6. Apply work and potential and kinetic energy and momentum principles to particles and rigid bodies.
7. Setup and solve rigid body static equilibrium, kinematic and dynamic problems by using engineering software tools.

MME 303 Fluid Flow and Convection

Basic principles of fluid statics and dynamics, including conservation of mass, energy, and momentum. Dimensional analysis and the Buckingham PI Theorem. Bernoulli's Law and application to steady state and dynamic problems. Convection, and boundary layer problems.
Prereq.: MME 201 or MME 202, MATH 327 or (MATH 325 and MATH 312), GENG 380, admittance to major 4 Cr. Fall | Spring

Student Learning Outcomes

1. Calculate buoyancy and hydrostatic forces.
2. Calculate energy and moment for viscous and inviscid flows.
3. Apply dimensional analysis to fluid models.
4. Calculate forces and pressure losses for viscous flow.
5. Calculate heat convection in internal and external flows.

MME 333 Manufacturing Processes

Casting, forming, cutting, sheet-metal working, processing of polymers, ceramics, and composites; computer-aided manufacturing; joining processes; processing of non-traditional machining; surface-finishing processes; elements of the competitive and integrated manufacturing environment. Theories and practice. Lab.
Prereq.: ETS 345, MME 211 or MME 212, MME 224 or MME 225, admittance to the major 4 Cr. Fall | Spring

Student Learning Outcomes

1. Examine and explain the importance of material properties and methods to alter them in material processing.
2. Interpret manufacturing process parameters and their interactions.
3. Select optimum manufacturing processes for typical products.
4. Specify tools and machines for various manufacturing processes to achieve quality at lower overall cost.
5. Practice and employ material processing and metrology equipment and techniques.

MME 334 Lean Manufacturing

Application of lean principles for continuous improvement in manufacturing. Use of lean tools for waste elimination in manufacturing. Introduction to production engineering with a lean perspective.
Prereq.: MME 333, ETS 345, and admittance to the major 4 Cr. Spring

Student Learning Outcomes

1. Explain concepts of lean manufacturing and its historical development for waste elimination.
2. Demonstrate the knowledge and skills to use different lean tools for waste elimination and efficiency improvement of lean processes.
3. Explain issues in manufacturing such as process analysis, supply chain management, quality control, logistics management and inventory management in lean perspective.
4. Carry out process analysis, create value stream maps and action plans for lean implementation.
5. Carry out process selection and planning of manufacturing processes for the production of mechanical components with lean tools implemented.
6. Practice lean through real world project for waste eliminations.

MME 342 Fatigue and Machine Design

Fatigue concepts and analysis. Design of machine elements including fasteners, power screws, welded joints, springs, rolling-elements bearings, gears, and shafts.
Prereq.: MME 211 or MME 212, MME 224 or MME 225, MME 243 or MME 244, admittance to the major 4 Cr. Fall | Spring

Student Learning Outcomes

1. Select materials and/or modify geometries to achieve successful mechanical components and products, as determined by static and fatigue safety factors.
2. Design machine elements, such as welded joints

or bearings, to satisfy stress, deflection, life, and cost constraints.
3. Specify appropriate materials, geometries, and/or vendor products to satisfy various machine element requirements.
4. Perform analysis using common engineering methods such as MathCAD, Excel, Solidworks, and finite element.

MME 346 Mechanisms and Robotics

Kinematics and dynamic synthesis and analysis of mechanisms by using graphical and analytical methods and engineering software tools; Invention in engineering and patenting, Analysis of open kinematic chains and introduction to robotics.
Prereq.: MME 243 or MME 244, MATH 327 or (MATH 325 and MATH 312), GENG 380, admittance to the major 4 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze and specify the type of links and joints in mechanisms and understand the concept of mobility in machinery.
2. Design planar linkage mechanisms and gear trains for commonly used tasks in design of machinery such as motion, path and function generation by using modern computer tools.
3. Identify real world applications of mechanisms and understand technical aspects of the patenting process as they relate to mechanical machines.
4. Perform position, velocity and acceleration analysis of existing mechanisms and correlate the forces and their effects on machine design.
5. Understand the capabilities and limitations of industrial robots and perform basic kinematic analysis of robots.
6. Initiate, carry through, finalize and present a machine design problem under a teamwork setting.

MME 352 Measurement, Sensors and Sequential Control

Statistical analysis of engineering measurement, Analog and digital signals, Sampling theory, Static and dynamic process sensors including temperature, strain, force, pressure and sound, Micro-controllers, I/O devices, Programmable logic controllers.
Prereq.: MME 211 or MME 212, ECE 201 or ENGR 332, PHYS 235, and admittance to the major 4 Cr. Fall | Spring

Student Learning Outcomes

1. Apply basic statistical methods in engineering measurements and data presentation.
2. Implement the concepts of analog and digital signals, sampling and data storage.
3. Utilize computer tools as they relate to process measurement, signal processing and engineering simulation.
4. Characterize operation of transducers used in engineering measurement.
5. Select and implement strain, temperature, force, pressure and acoustic transducers in engineering measurement tasks.
6. Implement industrial programmable logic controllers (PLCs) by using ladder logic.

MME 353 Control of Dynamic Systems and Vibrations

Dynamic system modeling in time and frequency domain, First and second order system response, Elements of vibratory systems, Lumped element and continuous vibratory systems, Open and closed loop controller design, simulation and characterization for continuous and discrete systems, PID motion control. Lab.
Prereq.: MME 352, MATH 327 or (MATH 325 and MATH 312), GENG 380, admittance to the major. 4 Cr. Fall | Spring

Student Learning Outcomes

1. Create models of dynamic systems, block diagrams and utilize transfer functions to define dynamic systems.
2. Perform time and frequency domain analysis and response characterization of dynamic systems.
3. Design, simulate, apply and analyze stable, continuous and discrete control systems for various time-domain and frequency domain response characteristics.
4. Design PID servo controllers for industrial motion control applications.
5. Identify elements of vibratory systems and analyze vibratory system response by using software tools.

MME 360 Engineering Economics

Analysis of cost for manufacturing operations, tool-engineering economics, cost estimating, and cost accounting. Economic selection of equipment, economic lot sizes. Evaluating production economics and investment alternatives. Principles of Engineering Economics, effects of capital projects.
Prereq.: ECON 205 or ECON 206 2 Cr. Fall | Spring

Student Learning Outcomes
1. Calculate economic equivalence using interest formulas, tables, and spreadsheets.
2. Apply economic analysis in decision-making.
3. Apply the fundamental concepts of cost estimating.
4. Calculate and compare costs and benefits for an engineering project.
5. Explain engineering issues and their economic impact.

MME 380 Engineering Communication
Practice in planning, preparation, and critiquing of engineering reports and presentations. Application of Gantt charts, budgets, Mathcad, MATLAB, and/or other software to engineering projects and communication.
Prereq.: ENGL 191 Coreq.: MME 201, MME 211, MME 243, MME 333, or MME 342 2 Cr. Fall | Spring

Student Learning Outcomes
1. Generate and integrate mathematical equations in/between softwares.
2. Develop Gantt chart schedules and budgets for projects.
3. Communicate effectively in appropriate engineering technical language.
4. Critique communications.

MME 402 Energy Analysis and Applications
Power generation and conversion, HVAC, Radiation, transient heat transfer, numerical methods, refrigeration and heat pump applications, psychrometric calculations.
Prereq.: MME 303 and (MATH 320 or MATH 321 or PHYS 346) and admittance to major 4 Cr. Fall | Spring

Student Learning Outcomes
1. Solve heat transfer in 2D, transient, and radiation problems.
2. Calculate states and energy for modified Rankin cycle systems.
3. Calculate states and energy for refrigeration and heat pump systems.
4. Analyze humidity and moisture content using psychrometric methods.
5. Analyze and design turbomachinery equipment.

MME 404 Introduction to Computational Fluid Dynamics
Fluid flow and heat transfer; Boundary conditions; Turbulence; Finite Volume and Finite Difference methods and other methods; Algorithms; Commercial software.
Prereq.: MME 224 or MME 225, MME 303, MATH 320 or MATH 321 or PHYS 346, admittance to the major 3 Cr. Even Spring

Student Learning Outcomes
1. Explain the fundamental theory of CFD.
2. Explain and contrast basic CFD methods.
3. Apply CFD to fluid flow and heat transfer.
4. Formulate and solve problems using basic algorithms to solve basic fluid and heat transfer problems.
5. Formulate and solve problems using commercial CFD software.

MME 414 Composite Materials
Behavior, processing, and design of particulate and fiber-reinforced composite materials. Polymer, metal, and ceramic constituents. Micromechanics, single-lamina macromechanics, and lamination theory. Fatigue and fracture. New, nano, and biomaterials as structural materials.
Prereq.: MME 342, MATH 327, and admittance to major 3 Cr. Even Fall

Student Learning Outcomes
1. specify constituents, proportions, and orientations of a lamina using micromechanics to achieve design objectives 2. predict macromechanical properties for various orientations of a single lamina 3. predict macromechanical properties of a laminate using lamination theory 4. estimate safety factors for static and-or fatigue loading 5. optimize use of new, nano, or bio materials for structural applications including composites 6. design processing methods to fabricate high quality composites

MME 420 Finite Element Method
Linear finite element methods including shape functions, stiffness matrix, trusses, beams, and isoparametric elements. Applications to stress analysis and heat transfer with comparisons to other methods. Technical elective.
Prereq.: MME 201 or MME 202, MME 211 or MME 212, MME 224 or MME 225, MATH 327 or (MATH 325 and MATH 312), admittance to the major 3 Cr. Odd Spring

Student Learning Outcomes
1. Apply the fundamental theory of finite element methods.

2. Apply fundamental engineering concepts to define finite element models.
3. Formulate and solve problems using commercially available finite element software.
4. Validate and bound the accuracy of finite element model solutions using hand calculations.

MME 430 Metrology and Precision Manufacturing

Theories of tolerancing, gauging, error assessment and calibration, interferometry, precision sensing, applications to the design and monitoring of precision machinery. Technical elective.
Prereq.: MME 333, MATH 327 or (MATH 325 and MATH 312), admittance to the major 3 Cr. Even Fall

Student Learning Outcomes

1. Demonstrate and apply metrology principles.
2. Apply metrology principles to CNC and other precision manufacturing tools.
3. Calculate and assign tolerances using GD&T principles.
4. Design functional gages for the inspection of precision mechanical components.

MME 440 Solid Mechanics

Elasticity, energy methods, torsion of noncircular cross sections, nonsymmetrical bending, thin-walled beams, curved beams, plates, fatigue and fracture, and composites.
Prereq.: MME 342, MATH 327 or (MATH 325 and MATH 312), admittance to the major 3 Cr. Odd Spring

Student Learning Outcomes

1. Apply constitutive and compatibility equations to formulate the stress/strain state as measured by solving elasticity problems.
2. Analyze and design noncircular members in torsion and asymmetric beams in bending.
3. Determine stresses, strains, and/or deflections on real structures as demonstrated by designing structures with realistic constraints.
4. Use current design tools, including MathCAD, SolidWorks, and FEM software with confidence.

MME 442 Dynamics II

Three dimensional kinematics and kinetics of rigid bodies, gyroscopic motion, multi-body systems, Lagrange's equations.
Prereq.: MME 346, admittance to the major 3 Cr. Odd Fall

Student Learning Outcomes

1. Analyze three dimensional kinematics of systems of rigid bodies.
2. Explain and show how vibration analysis is applied on mechanical systems.
3. Evaluate dynamic system design based on force and energy interactions.
4. Apply dynamics concepts in complex mechanical design.

MME 443 Internship Variable

Variable credit internship course intended to expose students to engineering in industry; encourage community involvement. May be repeated.
Prereq.: Good standing in the major Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Experience the multidisciplinary nature of a real-life engineering work environment.
2. Understand the demands of participating in an engineering related project.
3. Apply knowledge gained in engineering courses.
4. Understand engineering staff career options.
5. Exposure to the synergy between classroom activities and real-life work environment in an industrial setting.

MME 444 Internship

An approved full time project at a company. May replace one MME free technical elective. Final report required.
Prereq.: PHYS 234 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Formulate a work plan and contract for an engineering position.
2. Integrate engineering work in their internship position.
3. Report their activities and projects in a logbook.
4. Write and present a summary of their work and accomplishments.

MME 450 Industrial Robots

Robot design, capabilities, economics, and interfacing. Forward and inverse arm solutions, Jacobian, control algorithms. Control hierachy and languages.
Prereq.: MME 346, MME 352, MATH 320 or MATH 321 or PHYS 346, admittance to the major 3 Cr. Even Spring

Student Learning Outcomes

1. Assess the efficient used for robotics in the manufacturing environment.
2. Apply important elements of robot design.
3. Determine the motion and performance capability of a robot design.
4. Write the programs to perform specific robot tasks.
5. Use a robot with external equipment interfacing.

MME 461 Quality Engineering

Modern concepts of quality engineering. Control charts and process capability analysis for quality improvements. Planning, conducting, and analyzing experiments to discover influential factors and sources of variation. Designing quality into products and processes using Taguchi techniques for robust and parameter design. Total quality management.
Prereq.: MME 333, STAT 353 or STAT 417, admitted to major 3 Cr. Fall

Student Learning Outcomes

1. Formulate and solve basic quality engineering problems.
2. Apply control charts and analyze process capability in manufacturing engineering applications.
3. Design, conduct, and analyze fractional and full factorial experiments to improve quality.
4. Employ Robust Design approaches in product and process design.
5. Compare and contrast six sigma and total quality management methods for quality control.
6. Use modern statistical tools to analyze the experimental data.

MME 462 Production Planning/Control

Production systems, forecasting and time series analysis, inventory systems, capacity and material requirements planning, project planning and operations scheduling, job sequencing. Batch and discrete-parts production. MRPII and JIT and CIM. Technical elective.
Prereq.: MME 330, MME 331 3 Cr. Spring

MME 464 Process and Tool Design

Manufacturing methods and product design at a competitive price. Methods of processing. Part design representation. Computer-Aided Process Planning (CAPP). Machine tool design: precision, drives and economy. Cutting and forming tool materials, sharpening, and standards. Design of jigs, fixtures, and pressworking tools.
Prereq.: MME 333, admittance to the major 3 Cr. Fall

Student Learning Outcomes

1. Produce mechanical parts using CNC machines.
2. Apply machining calculations to process planning.
3. Identify tool materials.

MME 470 Facilities Planning/Materials Handling

Work analysis, process design, and material flow analysis. Facility layout and material handling systems design using systems engineering approach. Stochastic process analysis and simulation techniques.
Prereq.: MME 333, STAT 353 or STAT 417, admittance to the major. 3 Cr. Spring

Student Learning Outcomes

1. Explain basics of production charts and systems.
2. Create facility layout.
3. Explain assembly line balancing techniques.
4. Design a process ergonomically.

MME 480 Senior Design I

Group engineering design project sequence under faculty supervision. Projects typical of problems engineers must solve in the field. Presentations and formal technical report.
Prereq.: MME 333, MME 342, MME 352, MME 380, admittance to the major, and at least 2.50 major GPA Coreq.: MME 303 or MME 334 3 Cr. Fall | Spring

Student Learning Outcomes

1. Prepare a project plan that includes analysis, synthesis, data interpretation, and execution of tasks in a typical engineering design project.
2. Prepare an initial cost and time estimate of the project.
3. Explain the project proposal to constituents.
4. Manage their tasks as a member of a coordinated design team.
5. Report their activities in a project logbook.

MME 481 Senior Design II

Continuation of group engineering design project under faculty supervision. Projects typical of problems mechanical and manufacturing engineers must solve in the field. Presentations and formal technical report.
Prereq.: MME 480, admittance to the major, minimum 2.50 major GPA 3 Cr. Fall | Spring

Student Learning Outcomes

1. Explain technical concepts in presentations.
2. Prepare current cost and time estimates of the project.

3. Use current design tools and resources to complete the project to specifications.
4. Write a final technical engineering report documenting the project.
5. Prepare and give a final engineering project presentation.

MME 490 Mechanical Engineering Topics

Emerging manufacturing methods, experiments, materials, design methods, thermal science issues, or processes applicable to manufacturing or mechanical engineering.Technical elective.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Compare and contrast engineering methods or principles.
2. Summarize engineering design, analysis, or fabrication methods.
3. Report engineering experiments, materials, or design methods.

Medical Laboratory Science (MLS)

MLS 200 Medical Laboratory Basics

Theory and application of basic techniques and instruments used in medical laboratories. May be repeated. Grading option is S/U or letter grade, depending on clinical affiliate.
Coreq.: 1-2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Perform basic laboratory skills using appropriate instrumentation, standards and controls.
2. Demonstrate safe work, quality control and infection control principles within the laboratory.
3. Perform basic mathematical calculations used in medical applications for experiment set-up and data analysis.

MLS 301 Fundamentals of Medical Hematology

Theory, principles and applications of hematology techniques used in analysis of blood samples in medical laboratories. May be repeated.Grading option is S/U or letter grade, depending on clinical affiliate.
Prereq.: MLS 200 Coreq.: 1-4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Perform and interpret routine hematology and hemostasis diagnostic tests using appropriate instrumentation, standards, controls and computer applications during pre-analytic and post-analytic phases.
2. Recognize unexpected results and instrument malfunction and take appropriate action.
3. Correlate the laboratory tests to disease processes and apply basic physiology.
4. Apply safety standards and government regulations to all procedures.

MLS 302 Fundamentals of Medical Chemistry

Introduction to the theory, principles and applications of chemistry techniques used in the medical laboratory. May be repeated. Grading option is S/U or letter grade, depending on clinical affiliate.
Prereq.: CHEM 210, MLS 200 Coreq.: 1-4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Perform and interpret routine clinical chemistry diagnostic tests using appropriate instrumentation, standards, controls and computer applications during pre-analytic and post-analytic phases.
2. Recognize unexpected results and instrument malfunction and take appropriate action.
3. Correlate the laboratory tests to disease processes and apply basic physiology.
4. Apply safety standards and government regulations to all procedures.

MLS 303 Fundamentals of Medical Immunology

Theory, principles and applications of immunology techniques performed in the medical laboratory. May be repeated. Grading option is S/U or letter grade, depending on clinical affiliate.
Prereq.: MLS 200 Coreq.: 1-2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Perform and interpret routine immunology tests using appropriate instrumentation, standards, controls and computer applications during pre-analytic and post-analytic phases.
2. Recognize unexpected results and instrument malfunction and take appropriate action.
3. Correlate the laboratory tests to disease processes.
4. Apply safety standards and government regulations to all procedures.

MLS 304 Fundamentals of Medical Microbiology

Theory and appplication of isolation and identification techniques performed in the medical

microbiology laboratory. May be repeated. Grading option is S/U or letter grade, depending on clinical affiliate.
Prereq.: MLS 200 Coreq.: 1-7 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Perform and interpret routine microbiology diagnostic tests using appropriate procedures, instrumentation, standards, controls and computer applications during pre-analytic, analytic and post-analytic phases allowing for the identification of 90% of the usually occurring bacteria.
2. Demonstrate competency in routine cultures (urine, respiratory, blood, and stool) as well as miscellaneous cultures such as abscess, wound, genital, and body fluids.
3. Operate microscopes efficiently.
4. Follow proper technique preparing and Gram staining isolates.
5. Correlate the laboratory tests to disease processes.

MLS 305 Fundamentals of Medical Immunohematology

Introduction to the theory and applications of immunohematology techniques used in medical laboratories. May be repeated. Grading option is S/U or letter grade, depending on clinical affiliate.
Prereq.: MLS 200, MLS 303 Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Perform and interpret all routine immunohematologic diagnostic tests using appropriate manual procedures, instrumentation, standards, controls and computer applications during pre-analytic, analytic and post-analytic phases.
2. Interview and test blood donors.
3. Store and effectively use blood components.
4. Recognize unexpected results and instrument malfunction and take appropriate action.
5. Correlate the laboratory tests to disease processes and understand basic physiology.
6. Apply safety standards and government regulations to all procedures.

MLS 306 Fundamentals of Medical Microscopy and Urinalysis

Theory, principles and application of urinalysis, phlebotomy and body fluid techniques performed in the medical laboratory. May be repeated. Grading option is S/U or letter grade, depending on clinical affiliate.
Prereq.: MLS 200 Coreq.: 1-2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Perform and interpret routine urinalysis and body fluid diagnostic tests using appropriate instrumentation, standards, controls and computer applications during pre-analytic, analytic and post-analytic phases.
2. Correlate the laboratory tests to disease processes and understand basic physiology.
3. Apply safety standards and government regulations to all procedures.

MLS 310 Anatomy and Physiology for Medical Laboratory Scientists

Anatomy and physiology of humans in relationship to disease processes diagnosed by medical laboratory scientists. May be repeated. Grading option is S/U or letter grade, depending on clinical affiliate.
Prereq.: BIOL 103 Coreq.: 1-2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Distinguish between normal or abnormal laboratory results.
2. Correlate anatomy of the major organ systems with normal and abnormal laboratory results.
3. Correlate abnormal laboratory results with physiological conditions of the major organ systems.
4. Distinguish between metabolic and respiratory acidosis and alkalosis and provide examples.
5. Suggest additional laboratory tests required to follow abnormal test results.

MLS 312 Molecular Pathology for Medical Laboratory Scientists

Genetics, immunology and molecular aspects of diseases tested for in medical laboratories. Grading option is S/U or letter grade, depending on clinical affiliate.
Prereq.: BIOL 103, MLS 303 Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Describe principles of heredity.
2. List traits and mutations that lead to disease.
3. List immune system disorders and the conditions they cause.

4. List and describe common techniques used in a medical molecular diagnostics laboratory.

MLS 401 Clinical Hematology

Theory of blood cell formation; hematological diseases, hemostasis; microscopic examination of blood and bone marrow; experience with hematological instruments and techniques which determine major hematologic and clotting parameters.
Coreq.: 1-8 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Perform and interpret normal and abnormal hematology and coagulation results using manual procedures, instrumentation, standards, controls and computer applications during pre-analytic, analytic, and post-analytic phases of testing.
2. Recognize unexpected results and instrument malfunction and determine appropriate action to correct and validate.
3. Correlate laboratory results to disease processes and determine related physiology.
4. Evaluate quality control values and recommend necessary actions.

MLS 402 Clinical Chemistry

Identification and quantitation of specific chemical substances in blood and body fluids by various analytical techniques; clinical correlation with disease states; principles of instrumentation; quality control; data processing; toxicology.
Coreq.: 1-11 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Perform and interpret normal and abnormal clinical chemistry tests using appropriate manual procedures, instrumentation, standards, controls and computer applications during pre-analytic, analytic, and post-analytic phases.
2. Recognize unexpected clinical chemistry test results and instrument malfunction and take appropriate action to correct and validate.
3. Correlate clinical chemistry laboratory test results to disease processes and determine related physiology.
4. Evaluate quality control values and recommend necessary actions.
5. Apply critical thinking skills to solve case studies.

MLS 403 Clinical Immunology

Antigen/antibody structure, function and interaction; basic principles and procedures of humoral and cellular immunology; performance and clinical correlation of serological testing; quality control.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Compare and contrast the function and structure of the five classes of immunoglobulins (antibodies).
2. Compare and contrast the principles and procedures of humoral and cellular immunology.
3. Perform and interpret normal and abnormal immunology tests using appropriate manual procedures, instrumentation, standards, controls and computer applications during pre-analytic, analytic, and post-analytic phases.
4. Recognize unexpected immunology test results and instrument malfunction and take appropriate action to correct and validate.
5. Correlate immunology laboratory test results to disease processes and determine related physiology.
6. Evaluate quality control values and recommend necessary actions.
7. Apply critical thinking skills to solve case studies.

MLS 404 Clinical Microbiology

Cultivation, isolation, and identification of bacteria, fungi, parasites, and viruses; determination of sensitivity to antimicrobial agents; clinical correlations to disease states; principles of asepsis; environmental monitoring; quality control.
Coreq.: 1-9 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Perform and interpret normal and abnormal microbiology tests using appropriate manual procedures, instrumentation, standards, controls and computer applications during pre-analytic, analytic, and post-analytic phases.
2. Correlate laboratory test results to disease processes and determine related physiology.
3. Evaluate quality control results and recommend necessary actions.
4. Apply critical thinking skills to solve case studies.

MLS 405 Clinical Immunohematology

Blood group systems, principles and procedures for antibody detection and identification; donor blood collection; preservation; processing; component therapy; transfusion reaction evaluation; Rh immune globulin; quality control.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Perform and interpret normal and abnormal Blood Banking tests using appropriate manual procedures, instrumentation, standards, controls and computer applications during pre-analytic, analytic, and post-analytic phases.
2. Recognize unexpected test results and instrument malfunction and take appropriate action to correct and validate.
3. Correlate laboratory test results to disease processes and determine related physiology.
4. Evaluate quality control values and recommend necessary actions.
5. Apply critical thinking skills to solve case studies.
6. Interview and test blood donors.
7. Recommend proper use of blood components.
8. Apply safety standards and government regulations to all procedures.

MLS 406 Clinical Microscopy

Theory of renal function in health and disease; renal function tests including chemical and microscopic examination of urine, feces, gastric, and spinal fluids and other body fluid analysis; quality control.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Perform and interpret normal and abnormal tests on urine and other body fluids using appropriate manual procedures, instrumentation, standards, controls and computer applications during pre-analytic, analytic, and post-analytic phases.
2. Recognize unexpected test results and instrument malfunction and take appropriate action to correct and validate.
3. Correlate laboratory test results to disease processes and determine related physiology.
4. Evaluate quality control values and recommend necessary actions.
5. Apply critical thinking skills to solve case studies.

MLS 407 Laboratory Management/Education

Basic management principles, policy and procedure development, job descriptions, budgets, government regulations. Education principles, construction of objectives, tests and evaluation tools, bench teaching.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Develop and implement laboratory management principles and policies.
2. Evaluate a Standard Operating Procedure and recommend revisions.
3. Revise their job description, resume, and cover letter.
4. Construct objectives, exam items and other evaluation tools.
5. Evaluate quality control values and recommend necessary actions.
6. Assess a laboratory's readiness for an accreditation site visit.
7. Revise a laboratory budget to reduce costs by 10%.

MLS 444 Internship

Supervised rotations in clinical laboratories.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Military Science (MILS)

MILS 101 Foundations of Officership

Issues and competencies central to a commissioned officer's responsibilities. Framework for understanding officership, leadership, and Army values and "life skills" such as physical fitness and time management.
1 Cr. Fall

Student Learning Outcomes

1. Describe military leadership as it pertains to each individual.
2. Analyze the roles and organization of the United States Army.
3. Describe military customs and traditions.
4. Manage your time effectively.
5. Value physical fitness ethics and maintain physical fitness.

MILS 102 Basic Leadership

Leadership fundamentals such as problem solving, communications, briefings and effective writing, goal setting, techniques for improving listening and speaking skills, and an introduction to counseling.
1 Cr. Spring

Student Learning Outcomes

1. Describe military leadership as it pertains to each individual.
2. Analyze the roles and organization of the United States Army, within the context of warfare in the 21st Century.
3. Demonstrate a working understanding of squad level tactical operations.

MILS 103 Foundations of Officership Lab

Hands on application of military skills, physical training and evaluation standards.
Coreq.: MILS 101 1 Cr. Fall

Student Learning Outcomes
1. Employ critical reflection, inquiry, dialogue, and group interactions to learn.
2. Participate in class discussion, sharing personal perspectives and experiences related to principles discussed in class or reading.
3. Work with fellow students as a team to engage in class and lab exercises.

MILS 104 Basic Leadership Lab
Hands on application of military skills, physical training and evaluation standards.
Coreq.: MILS 102 1 Cr. Spring

Student Learning Outcomes
1. Describe the relationship between leader character and competence.
2. Distinguish between leadership attributes and core leader competencies.
3. Illustrate how an Army leader leads, develops, and achieves excellence.
4. Explain the basic elements for effective Army communication.
5. Understand how the Seven Army Values impact leadership.
6. Understand the importance of exhibiting professionalism as an officer.
7. Develop land navigation and military map skills.
8. Describe the components of a fire team and squad.
9. Describe the three individual movement techniques.

MILS 201 Individual Leadership Studies
Identifying successful leadership characteristics using observation of others and self through experiential learning exercises.
2 Cr. Fall

Student Learning Outcomes
1. Apply team building tactics, such as; how to influence, how to communicate, how and when to make decisions, how to engage in creative problem-solving, and how to plan and organize.
2. Improve proficiency in individual skills and leadership abilities.
3. Demonstrate the value of the Army ethic by defining applications of basic leadership.

MILS 202 Leadership and Teamwork
Theory and practice to build successful teams, various methods for influencing action, effective communication in setting and achieving goals, the importance of timing the decision, creativity in the problem solving process, and obtaining team buy-in through immediate feedback.
2 Cr. Spring

Student Learning Outcomes
1. Lead tactical teams in the operational environment.
2. Employ the study of the theoretical basis of the Army Leadership Requirements Model to explore the dynamics of adaptive leadership in the context of military operations.
3. Assess their own leadership styles (both their own and others) to improve self-awareness.
4. Practice communication and team building skills.

MILS 203 Individual Leadership Studies Lab
Hands on application of military skills, physical training and evaluation standards.
Coreq.: MILS 201 1 Cr. Fall

Student Learning Outcomes
1. Assess their own leadership styles (both their own and others) to improve self-awareness.
2. Practice communication and team building skills.
3. Demonstrate dimensions of transformational and situational leadership.
4. Define methods of assessing leadership styles.

MILS 204 Leadership and Teamwork Lab
Hands on application of military skills, physical training and evaluation standards.
Coreq.: MILS 202 1 Cr. Spring

Student Learning Outcomes
1. Explain the situational, transformational, and adaptive leadership theories and their relationship to the Army Leadership Requirements Model.
2. Illustrate dimensions of transformational and situational leadership.
3. Describe the LDP process of evaluating behavior.
4. Explain the relationship Army Values and the Army's Equal Opportunity program.
5. Practice effective writing techniques in accordance with the Army standard for effective writing.
6. Describe the Army Threat Awareness and Reporting Program, Threat Levels and Force Protection Conditions, the National Terrorism

Advisory System, and the Army's approach to Emergency Management.
7. Explain the five-paragraph format for an operations order and Interpret an operation order.
8. Demonstrate terrain analysis and route planning skills using the five aspects of military terrain (OAKOC).
9. Explain how squads and platoons plan for and conduct patrols and the characteristics of the defense.

MILS 210 The Evolution of United States Warfare I

United States military operations from colonial times through World War I.
2 Cr. Fall

Student Learning Outcomes
1. Demonstrate an awareness of the relationship of the military establishment to society, particularly in the United States.
2. Demonstrate understanding of the evolution of war and the progression of military professionalism.
3. Awareness of the experience and purpose of military operations.
4. Demonstrate an understanding of the military as a profession.

MILS 211 The Evolution of United States Warfare II

United States military operations from the end of World War I to the present.
2 Cr. Spring

Student Learning Outcomes
1. Demonstrate an awareness of the relationship of the military establishment to society, particularly in the United States.
2. Demonstrate an understanding of the evolution of war and the progression of military professionalism.
3. Awareness of the experience and purpose of military operations.
4. Demonstrate an understanding of the military as a profession.

MILS 301 Leadership and Problem Solving

Self-assessment of leadership style, developing personal fitness regimen, and planning and conducting individual/small unit tactical training while testing reasoning and problem-solving techniques.
3 Cr. Fall

MILS 302 Leadership and Ethics

Role of communications, values, and ethics in effective leadership. Ethical decision-making, consideration of others, spirituality in the military, and Army leadership doctrine. Emphasis on improving oral and written communication abilities.
3 Cr. Spring

MILS 303 Leadership and Problem Solving Lab

Hands on application of military skills, physical training and evaluation standards.
Coreq.: MILS 301 1 Cr. Fall

MILS 304 Leadership and Ethics Lab

Hands on application of military skills, physical training and evaluation standards.
Coreq.: MILS 302 1 Cr. Spring

Student Learning Outcomes
1. Apply situational leadership actions in leading a small unit.
2. Analyze the factors that motivate Soldiers.
3. Explain rules of engagements and the Law of Land Warfare.
4. Apply principles of time management, effective writing, and communication.
5. Present effective briefings.
6. Describe the Brigade Combat Team (BCT).
7. Explain Unified Land Operations.
8. Apply the Operations Orders Process.
9. Demonstrate knowledge of platoon tactical operations and operating Bases.

MILS 401 Leadership and Management

Planning and executing complex operations, functioning as a member of a staff, and mentoring subordinates. Training management, methods of effective staff collaboration, and developmental counseling techniques.
Prereq.: MILS 301, MILS 302 3 Cr. Fall

MILS 402 Officership

Case study analysis of military law and practical exercises on establishing ethical command climate. Students must complete semester long Senior Leadership Project to plan, organize, collaborate, analyze, and demonstrate their leadership skills.
Prereq.: MILS 301, MILS 302 3 Cr. Spring

MILS 403 Leadership and Management Lab

Hands on application of military skills, physical training and evaluation standards.
Coreq.: MILS 401 1 Cr. Fall

MILS 404 Officership Lab
Hands on application of military skills, physical training and evaluation standards.
Coreq.: MILS 402 1 Cr. Spring

Student Learning Outcomes
1. Apply Army leader attributes and core competencies as Cadet battalion leaders.
2. Mentor the personal development of underclass Cadets.
3. Demonstrate a working knowledge of the Army's programs on equal opportunity (EO) and Sexual Harassment/Assault and Response Prevention (SHARP) and proper leader ethics.
4. Prepare a personal developmental plan using the junior officer developmental support form and officer evaluation report model.
5. Develop and present a battle analysis case study brief of a historic military battle on how cultural awareness can impact a unit and mission.
6. Identify and explain the culture of terrorism and the different non-gov. orgs, civilians on the battlefield, and host nation support that can impact unit operations.
7. List and describe the correct procedures in the supply and maintenance process.
8. Apply the principles of force protection and operational security in Full Spectrum Operations (FSO) against counterinsurgency operations.
9. Lead CASEVAC procedures at unit level.

MILS 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contract departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. DEMAND

Music (MUS)

MUS 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Music Education (MUSE)

MUSE 201 Teaching K-8 Music
Procedures and resources for classroom teachers.
Prereq.: MUSM 100 2 Cr. Fall | Spring

Student Learning Outcomes
1. Select and modify musical materials according to the developmental needs of children in grades K-8.
2. Integrate music with other curriculum areas in grades K-8.
3. Synthesize knowledge of developmentally appropriate musical activities to plan and sequence musical instruction in grades K-8.
4. Implement appropriate strategies for leading musical activities such as singing, movement, and playing instruments.
5. Differentiate instruction to meet the needs of special learners in K-8 classrooms.
6. Justify the inclusion of music in the K-8 curriculum.

MUSE 240 Introduction to Music Education
Music programs in the public schools and roles of professional music educators. Reading, observation, and discussion of contemporary trends and practices.
Prereq.: MUSM 101 3 Cr. Fall

Student Learning Outcomes
1. Describe the professional and personal possibilities of music education as a career.
2. Articulate a philosophy of music education and describe the diversity of opportunities for music education in today's schools.
3. Use appropriate technology in music classrooms to meet the needs of diverse learners.
4. Demonstrate basic skills needed to teach music in classrooms and ensembles.
5. Create a personal file of resources related to teaching music.

MUSE 244 Introduction to Instruments
String, wind and percussion techniques, acoustics and pedagogy for vocal music education students.
Prereq.: MUSM 102 2 Cr. Spring

Student Learning Outcomes
1. Demonstrate basic performance proficiency on selected instruments in the woodwind, brass, percussion, and string families.
2. Examine strategies to improve middle/high school student performance on woodwind, brass, percussion, and string instruments.
3. Employ teaching/rehearsal strategies for working with middle/high school vocal ensembles that include instrumental musicians.

4. Identify resources and materials that will aid in teaching middle/high school vocal ensembles that include instrumental musicians.

MUSE 331 Elementary Music Methods

Methods and materials for fostering students' musical growth in preschool through middle school years.
Prereq.: MUSE 240 3 Cr. Fall

Student Learning Outcomes

1. Demonstrate teaching techniques and musical skills appropriate for teaching preschool through middle school music.
2. Explore a repertoire of musical activities appropriate for preschool through middle school students in a variety of settings.
3. Articulate knowledge of principles of music literacy and English language literacy and apply skills to teach both.
4. Demonstrate analytic and observational skills within teaching and rehearsal situations.
5. Integrate goals and objectives appropriate for preschool through middle school students in a variety of settings.

MUSE 332 Secondary Music Methods

Methods and materials for developing students' musical growth through general music and performance classes, grades 5-12.
Prereq.: MUSE 331; NES Essential Academic Skills test or equivalent 3 Cr. Spring

Student Learning Outcomes

1. Develop curriculum appropriate for secondary music classes and ensembles, based upon the Minnesota Academic Standards for the Arts;
2. Teach lessons using a variety of teaching strategies appropriate for secondary music classes and/or ensembles.
3. Develop and implement strategies for teaching language and literacy in secondary classes and ensembles.
4. Demonstrate basic competency on guitar and piano appropriate for using them as teaching tools.
5. Communicate a thoughtful perspective on the place of performance and non-performance classes in today+s secondary curriculum.

MUSE 334 Introduction to Methods of Orff and Kodaly

Pedagogical techniques of Orff-based and Kodaly-based music education for elementary and middle school.
Prereq.: MUSE 331 or MUSE 420 2 Cr. Fall

Student Learning Outcomes

1. Compare and contrast pedagogical and philosophical ideas associated with Dalcroze Eurhythmics, the Orff approach and the Kodßly process of music education.
2. Develop instructional materials appropriate for use in Orff-based and Kodßly-based music teaching.
3. Demonstrate teaching techniques appropriate for each of the three teaching methods, including improvisation and the use of instruments.
4. Analyze repertoire for use in each of the methods.

MUSE 345 Instrumental Pedagogy

Teaching instrumental performance. Restricted to BM majors.
2 Cr. DEMAND

Student Learning Outcomes

1. Apply basic principles of technique and musicianship appropriate to musical instruments.
2. Design instructional approaches and modifications for teaching instruments that utilize a variety of instructional materials and repertoire, representing diverse periods, cultures and skill levels.
3. Discuss the historical and acoustical background of instruments.
4. Compose or arrange beginning level ensemble pieces that demonstrate idiomatic writing for the instruments.

MUSE 346 String Techniques and Pedagogy

Techniques and skills for performance. Selection, care and maintenance of instruments, teaching techniques, and instructional materials.
2 Cr. Even Fall

Student Learning Outcomes

1. Apply basic principles of technique and musicianship on violin, viola, cello, and string bass including good tone, good posture, good basic right and left hand technique, all finger patterns, rudimentary vibrato and shifting skills, basic bowings and bowing patterns, and expressive techniques.
2. Apply minimal reading ability on the string instruments, including the alto clef for viola, and fingerings.
3. Identify criteria for string instrument selection.
4. Apply knowledge of string instrument construction necessary for minor instrument repair.

5. Design instructional approaches and modifications for teaching each of the string instruments that utilize a variety of instructional materials and repertoire, representing diverse periods, cultures and skill levels.

MUSE 347 Brass Techniques and Pedagogy

Techniques and skills for performance. Selection, care and assembly of instruments, teaching, techniques, and instructional materials.
2 Cr. Odd Fall

Student Learning Outcomes

1. Apply basic principles of technique and musicianship appropriate to trumpet, French horn, trombone, and tuba.
2. Design instructional approaches and modifications for teaching each of the brass instruments that utilize a variety of instructional materials and repertoire, representing diverse periods, cultures and skill levels.
3. Discuss the historical and acoustical background of brass instruments.
4. Compose or arrange beginning level ensemble pieces that demonstrate idiomatic writing for brass instruments.

MUSE 348 Woodwind Techniques and Pedagogy

Techniques and skills for performance. Selection, care and assembly of instruments, teaching techniques, and instructional materials.
2 Cr. Odd Spring

Student Learning Outcomes

1. Apply basic principles of technique and musicianship appropriate to flute, oboe, clarinet, bassoon, and saxophone.
2. Design instructional approaches and modifications for teaching each of the five woodwind instruments that utilize a variety of instructional materials and repertoire, representing diverse periods, cultures and skill levels.
3. Discuss the historical and acoustical background of woodwind instruments.
4. Compose or arrange beginning level ensemble pieces that demonstrate idiomatic writing for the woodwind instruments.

MUSE 349 Percussion Techniques and Pedagogy

Techniques and skills for percussion performance. Selection of instruments and repertoire, care and maintenance, teaching techniques and rehearsal strategies, and instructional materials for the music educator.
2 Cr. Even Spring

Student Learning Outcomes

1. Apply basic principles of technique and musicianship appropriate to each percussion instrument.
2. Formulate a mature concept of tone production on each instrument as expressed through performance.
3. Design instructional approaches and modifications for teaching percussion.
4. Identify musical considerations in the interpretation of percussion scores.
5. Notate scores and parts according to professional standards for percussion instruments.

MUSE 420 Early Childhood Music

Teaching music to children ages two through seven.
2 Cr. DEMAND

Student Learning Outcomes

1. Prepare materials appropriate for pre-school children to use in making music.
2. Design lessons and activities for individual and group musical learning.
3. Design and implement experiences that integrate music with other areas of the pre-school curriculum.
4. Communicate an understanding of the place of music in a young child's life in terms that parents will understand.

MUSE 428 Introduction to Orff-Schulwerk

Orff-Schulwerk-based musical instruction, with emphasis on elementary and middle-school music.
Prereq.: MUSE 201, MUSE 331 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate technical skill playing small percussion, barred percussion, and recorders.
2. Respond to musical cues in creative movement and in folk dancing.
3. Create musical settings appropriate for use with an Orff instrumentarium.
4. Design and teach lessons incorporating the Orff approach.

MUSE 430 Elementary and Class Piano Pedagogy

Basic problems, techniques and materials relevant to teaching elementary piano in the private studio and class piano settings. Professional responsibilities of piano teachers and business aspects of managing a

private piano studio.
2 Cr. DEMAND

Student Learning Outcomes
1. Analyze pedagogical techniques and materials appropriate for the elementary piano student.
2. Apply solutions to the following: teaching piano technique, teaching musicianship, choosing progressive materials appropriate to the individual student.
3. Develop strategies to use group lessons for functional piano, elementary music theory and ensemble playing.
4. Examine various approaches to beginning and managing a studio business.
5. Develop tactics for managing parental, community and professional relationships.

MUSE 431 Intermediate and Advanced Piano Pedagogy

Basic problems, techniques and materials relevant to teaching piano to the intermediate and advanced student. History of pedagogy and performance practices.
Prereq.: MUSP 210 2 Cr. DEMAND

Student Learning Outcomes
1. Analyze pedagogical techniques and materials appropriate for the intermediate and advanced piano student.
2. Apply solutions to the following: teaching piano technique, teaching musicianship and interpretations, choosing progressive materials appropriate to the individual student, planning repertoire for recitals and competitions.
3. Assess the performance practices specific to each style period.
4. Examine the history of piano pedagogy and the various philosophical and technical approaches to it.

MUSE 442 Vocal Pedagogy

Teaching of voice including the young voice.
2 Cr. Even Fall

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the voice.
2. Formulate a mature concept of tone production on the voice as expressed through performance.
3. Design instructional approaches and modifications for teaching vocal students.
4. Identify musical considerations in the interpretation of vocal/choral scores.
5. Apply knowledge of anatomy and physiology of the body and the function and mechanics of the human voice as it relates to vocal technique.

MUSE 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Apply principles of music in a professional environment.
2. Engage in professional practice.
3. Describe and evaluate their internship experience.

MUSE 468 Student Teaching Seminar

Issues specific to student teaching in music.
Coreq.: ED 467 1 Cr. Fall | Spring

Student Learning Outcomes
1. Design lessons appropriate for the context in which the student is working.
2. Teach lessons to students in K-12 classes.
3. Reflect upon lessons and use the knowledge gained from that reflection to improve future lessons.

MUSE 477 Practicum in Piano Pedagogy I

Utilization of knowledge gained in 430, 431 through practical supervised experience.
Prereq.: CEEP 361, MUSE 334, MUSE 430, MUSE 334, MUSE 431 or APSY 361 1 Cr. Fall

Student Learning Outcomes
1. Develop curriculum appropriate for secondary music classes and ensembles, based upon the Minnesota Academic Standards for the Arts.
2. Teach lessons using a variety of teaching strategies appropriate for secondary music classes and/or ensembles.
3. Develop and implement strategies for teaching language and literacy in secondary classes and ensembles.
4. Demonstrate basic competency on guitar and piano appropriate for using them as teaching tools.
5. Communicate a thoughtful perspective on the place of performance and non-performance classes in today's secondary curriculum.

MUSE 478 Practicum in Piano Pedagogy II

Continuation of 477.
Prereq.: MUSE 430, MUSE 431, MUSE 334 or APSY 463 1 Cr. Spring

MUSE 483 Workshop: New Music Materials Clinic

Participation in clinic and music reading sessions at an approved music materials clinic. May be repeated, maximum 1 credit toward a degree program.
1 Cr. Summer

Student Learning Outcomes

1. Summarize content and context of individual presentations.
2. Analyze individual materials in terms of pedagogical and performance potential.
3. Describe application of individual materials in student's teaching.

MUSE 489 Workshop: Minnesota Music Educators Clinic

Participation in clinic and workshop sessions at Minnesota Music Educators Association Mid-Winter Clinic. May be repeated. Maximum of 1 credit, toward a degree program.
1 Cr. Spring

Student Learning Outcomes

1. Summarize content and context of individual presentations.
2. Analyze content of presentations in terms of pedagogical and performance potential.
3. Describe application of presentations' content in student's teaching.

Music Musicianship (MUSM)

MUSM 100 Introduction to Musical Concepts

An introductory study of the language and basic concepts of music. (Not applicable for credit towards a music major/minor program.)
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSM 101 Theory I

Western diatonic voice leading and harmonic practices of the 18th and 19th centuries.
Coreq.: MUSM 111 3 Cr. Spring

Student Learning Outcomes

1. Use all music fundamentals within common practice tonality.
2. Employ basic voice-leading principles within the parameters of counterpoint.
3. Apply tonal harmonic progression.

MUSM 111 Musicianship 1

Active analysis, creation and performance of music, including major tonality in simple and compound meters.
Coreq.: MUSM 101 2 Cr. Spring

Student Learning Outcomes

1. Perform individually rhythmic duets, tapping one voice and speaking the other musically, with attention to phrase and cadence.
2. Perform individually rhythms in simple and compound meter and their corresponding rests.
3. Perform four voice I-IV-V cadential patterns on piano while singing one voice.
4. Sight-read diatonic melodies in major modes using solfege and notate 8-beat diatonic major melodies after hearing and singing them.
5. Improvise two-part phrases in periodic form, using voice, body percussion or instruments.

MUSM 123 Experiencing Live Music

The nature of music through live performances and through lectures and discussions relating to these performances. The listening will include live performances in class, on campus and in the community.
3 Cr. GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSM 125 Music in World Culture (Diversity)

Music and its function non-Western countries and various Western folk traditions. Listener's point of view. Oceania, East and Southeast Asia, India, Africa (and some American folk traditions). No previous musical experience required.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

MUSM 126 History of Rock and Roll Music

American musical styles including rhythm and blues, rock and roll, country, folk and rock in historical and cultural perspective.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSM 202 Theory II

Western chromatic voice leading and harmonic practices of the 18th and 19th centuries, and the analysis of basic large-scale formal structures.
Prereq.: MUSM 101 Coreq.: MUSM 205, MUSM 212 3 Cr. Fall

Student Learning Outcomes
1. Analyze representative musical examples in the style of 18th and 19th century tonal music.
2. Master the use of non-chord tones, diatonic 7th chords, secondary harmonies, modulations, binary forms and ternary forms.

MUSM 205 Introduction to Music Technology
Introduction to pedagogical and creative applications of computer-based music technology, and development of the skills necessary to further explore music technologies.
Coreq.: MUSM 202 2 Cr. Fall

Student Learning Outcomes
1. Describe computer operations and terminology as it relates to the music discipline.
2. Identify music resources.
3. Apply basic MIDI theory, including how to devise and use a MIDI network and sequencing application.
4. Utilize a music notation application to create professional quality scores and parts.
5. Demonstrate effective use of a DAW for audio recording, editing, and mixing.
6. Learn terminology of music technology and become familiar with the potential of the internet and World Wide Web as a music resource.
7. Utilize a digital recorder to record a performance and transfer a digital recording to a computer.

MUSM 212 Musicianship 2
Continuation of Musicianship 1, adding minor tonality and more advanced rhythms.
Coreq.: MUSM 202 2 Cr. Fall

Student Learning Outcomes
1. Individually perform rhythmic duets, tapping one voice and speaking the other musically, with attention to phrase and cadence. Dotted notes and syncopations are added to the curriculum.
2. Harmonize on piano major and minor melodies using any diatonic chord, performing the accompaniment while singing the melody.
3. Sight-read diatonic melodies in major and minor modes using solfege.
4. Notate 16-beat diatonic major and minor melodies after hearing and singing them.
5. Improvise major and minor melodies over a given chord progression, using an instrument or voice.

MUSM 229 Jazz History
Jazz music, musicians and the society that created them with emphasis on their relationship to rock and roll and jazz/rock fusion.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSM 301 Composition
Writing original compositions through practice and examination of music. May be repeated up to 6 credits.
1 Cr. Fall | Spring

Student Learning Outcomes
1. Employ the use of small forms and structures in the composition of music.
2. Apply contemporary contrapuntal and orchestration techniques for solo and chamber ensembles.
3. Organize the presentation of original music in concert.
4. Apply professional standards to the notation and preparation of musical scores and parts.

MUSM 303 Theory III
Advanced Western chromatic voice leading and harmonic practices of the common practice and post-romantic periods, and large-scale formal and structural principles in tonal music.
Prereq.: MUSM 202, MUSM 212 Coreq.: MUSM 213, MUSM 321 3 Cr. Spring

Student Learning Outcomes
1. Analyze representative musical examples from Western music from the 19th century.
2. Master advanced chromatic harmonies and large-scale formal structures, specifically borrowed, Neapolitan and augmented 6th harmonies.
3. Master the application of enharmonics and extended tertian and non-functional sonorities.
4. Articulate characteristics of artificial scale systems & modes, sonata-allegro structures and rondo structures.

MUSM 304 Theory IV
Study of theories and formal processes of Western musical practice from ca. 1900 to the present.
Prereq.: MUSM 303 3 Cr. Fall

Student Learning Outcomes
1. Analyze representative musical examples from 20th century Western music exemplifying the use of contemporary voice-leading; and formal, structural, rhythmic and notational techniques.
2. Use artificial scale systems and modes.
3. Examine extended tertian and non-tertian

sonorities.
4. Investigate set theory, classical serialism, sound-mass and texture based composition and minimalism.

MUSM 313 Musicianship 3
Continuation of Musicianship 2, adding chromaticism and advanced rhythms and meters.
Coreq.: MUSM 203 2 Cr. Spring

Student Learning Outcomes
1. Individually perform rhythmic duets, tapping one voice and speaking the other musically, with attention to phrase and cadence.
2. Harmonize on piano major and minor melodies using diatonic and chromatic harmonies, performing the accompaniment while singing the melody.
3. Sight-read chromatic melodies in major and minor modes using solfege.
4. Notate chromatic major and minor melodies and harmonies after hearing and singing them.
5. Improvise in a variety of forms; using an instrument, voice or body percussion.

MUSM 325 Topics in Musical Study
Variable topics in musical study. Designed for students wishing an elective in music. May be repeated with different topics to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Articulate a critical perspective on an issue or genre of music.
2. Analyze a specific issue or genre of music from a historically informed perspective.
3. Describe and analyze a musical topic using approaches such as literary, rhetorical, or cultural criticism, etc.
4. Evaluate and respond critically to the identified topic by writing or creative work.

MUSM 351 History of Western Music to 1750
Historical survey of western and non-western music from ancient Greece to 1750.
Prereq.: MUSM 202 3 Cr. Spring

MUSM 352 History of Western Music from 1750-1900
Historical survey of western music history from 1750-1900.
Prereq.: MUSM 202 3 Cr. Fall

MUSM 353 History of Music Since 1900
Historical survey of western and non-western music from 1900 to present.
Prereq.: MUSM 202 2 Cr. Spring

MUSM 402 Orchestration
Principles and methods of writing and arranging music for instrumental and vocal ensembles. Instruments of the orchestra, the human voice, Western music literature and arranging for various combinations of instruments.
Prereq.: MUSM 204 3 Cr. DEMAND

Student Learning Outcomes
1. Analyze the effectiveness of the orchestration of several extant works.
2. Apply knowledge of range, timbre, transposition, methods of sound production, and special effects to create idiomatic arrangements and/or original works for the instruments of the orchestra.
3. Perform on keyboard any transposed part of an orchestral score at concert pitch.
4. Synthesize the principles and methods of arranging music for a variety of ensembles.

MUSM 403 Counterpoint
Examination and application of contrapuntal practices of Western music of the 16th - 21st centuries.
Prereq.: MUSM 303 3 Cr. DEMAND

Student Learning Outcomes
1. Develop an understanding and the ability to apply concepts and methods of counterpoint by analyzing examples of 16th, 18th, and 20th century polyphonic music.
2. Develop an understanding and the ability to apply concepts and methods of counterpoint by composing in a number of representative forms of contrapuntal music: e.g. 2-3 part inventions, continuous variations, canons, fugues.

MUSM 404 Pedagogy of Music Theory
Western music theory and pedagogic methodology.
Prereq.: MUSM 304 2 Cr. Even Fall

MUSM 421 Instrumental Literature
Literature for solo, ensemble and chamber music performance by a specific instrument.
2 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate essential knowledge of a breadth of diversity in the literature for middle school and secondary instrumental ensembles.
2. Develop criteria for evaluating literature for use with instrumental middle school and secondary ensembles.
3. Identify and evaluate printed and online resources for core repertoire for band, orchestra, and jazz ensemble at middle school and secondary levels.
4. Describe and apply levels (grades) of difficulty associated with band/orchestra/jazz band music.
5. Analyze and determine strengths and weaknesses of several method and warm-up books.

MUSM 423 Jazz Harmony

Jazz harmony and its application in 20th century practices.
Prereq.: MUSM 302 2 Cr. DEMAND

MUSM 433 Electronic Sound

Development of audio recording and editing skills using portable digital recorders and in the studio. Sound-art projects reflecting different styles of fixed-media electroacoustic art based on recorded sound. History and literature of electroacoustic music.
3 Cr. Fall

Student Learning Outcomes

1. Understand and become familiar with the principles of acoustics and psychoacoustics.
2. Understand and become familiar with history and literature of fixed-media electroacoustic music and develop analytical approaches to fixed-media electroacoustic music.
3. Develop skills for editing and mixing sound using DAW software.
4. Develop skills using microphones and a DAW to record sound and will develop skills using microphones and a portable digital recording device to record sound.
5. Develop skills using plug-in signal processing software to transform sound.
6. Develop skills using a desktop computer to produce Red-Book Audio spec CDs.
7. Develop the concept application and project management skills by creating fixed-media electroacoustic works demonstrating a variety of techniques and styles of music in this genre since 1950.
8. Develop the concept application and project management skills by creating and presenting a finished acoustical work to the public during the course of the semester.

MUSM 434 Analog and Digital Synthesis

Create and compose with analog and digital synthesis. Sound-art projects reflecting different styles of fixed-media and real-time electroacoustic art based on synthesized sound. Introduction to history and literature of electroacoustic music featuring analog and digital synthesis.
3 Cr. Spring

Student Learning Outcomes

1. Understand and become familiar with the principles of acoustics and psychoacoustics.
2. Understand and become familiar with history and literature of synthesized and digital electroacoustic music and be able to develop analytical approaches to synthesized and digital electoacoustic music.
3. Develop skills digitally synthesizing sound, including classic AM, ring -modulated AM, FM, additive, subtractive, granular, and physical modeling synthesis.
4. Develop skills editing and mixing sound using DAW software and will develop skills using a DAW for MIDI recording, editing, and playback.
5. Develop skills using microphones and a portable digital recording device to record sound and to develop skills using plug-in signal processing software to transform sound.
6. Develop skills using a desktop computer to produce Red-Book Audio spec CDs.
7. Develop the concept application and project management skills by creating fixed-media and real-time electroacoustic works demonstrating a variety of techniques and styles of synthesis.
8. Develop the concept application and project management skills by creating and presenting a finished acoustic or real-time work to the public.

MUSM 435 Studio for Interrelated Media

Collaborative arts creation experience integrating music and other arts. Creating, rehearsing and performing collaborative/cross disciplinary works. Open to students from music and other arts areas: poetry, visual arts, theatre, film, dance.
3 Cr. Spring

Student Learning Outcomes

1. Understand and become familiar with existing fixed and multimedia sound art.
2. Develop advanced skills editing and mixing sound using DAW software.

3. Develop musical leadership and collaboration ability to include conducting and rehearsing; develop ensemble experience and skills.
4. Develop aural skills, including the interaction of musical elements and the ability to analyze and understanding of musical forms and structure in order to perform and compose.
5. Develop composition and improvisation skills.
6. Develop an advanced understanding of music technology and application to students' specialty.
7. Develop the concept-application and project-management abilities through creating and presenting a collaborative/cross-disciplinary art work.

MUSM 436 Piano Literature

Western piano literature since 1700.
Prereq.: MUSM 351, MUSM 352 2 Cr. DEMAND

MUSM 437 Topics in New Media: Non-Traditional Performance Study

Real-time sound manipulation and sound installations in new media. Use of common software in the field. Construction of low-tech, interactive devices. History and current practices of realtime or installation sound art.
3 Cr. Fall

Student Learning Outcomes

1. Understand and become familiar with the history and literature of interactive music, sound installation, or low tech audo.
2. Develop an advanced understanding of how technology can play a role in a live music making experience.
3. Develop an understanding of circuitry and electronic engineering.
4. Develop the concept-application and project-management abilities through creating and presenting a collaborative/cross-disciplinary art work.

MUSM 438 Topics in New Media: Theoretical Approach

Role of sound and image in cinema, new media, and the Web from a historical and analytical perspective. Use of tools for creating works employing audio and images, and implementing new media interactivity.
3 Cr. Fall

Student Learning Outcomes

1. Understand and become familiar with the history and literature of sound and music and its use in image or online audio.
2. Develop an understanding of current web practice in music distribution.
3. Participate in online communities.
4. Develop advanced understanding of how technology can play a role in a live music making experience.
5. Develop a concept-application and project-management abilities through creating and presenting a collaborative/cross-disciplinary art work.
6. Enhance communication and analytical skills by writing about musical technology and concepts.

MUSM 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr.

Student Learning Outcomes

1. Apply principles of music in a professional environment.
2. Engage in professional practice.
3. Describe and evaluate their internship experience.

MUSM 468 Jazz Improvisation

Improvisation in the jazz style for all instruments. Permission of the instructor.
2 Cr. DEMAND

MUSM 469 Jazz Arranging

Application of practical and theoretical harmony to jazz style and scoring for jazz ensembles.
Prereq.: MUSM 204 2 Cr. DEMAND

Music Performance (MUSP)

MUSP 100 Convocation Attendance

Attendance at concert performances and lectures.
0 Cr. Fall | Spring

Student Learning Outcomes

1. Identify different musical genres and performance practices 2. Observe principles of technique and musicianship appropriate to the performance of music from diverse styles and time periods 3. Demonstrate aural differentiation through critical review of live performances 4. Identify cooperative learning and creative expression through performance 5. Place works of music into

their historical context 6. Value healthy practices that support life-long engagement in music

MUSP 101 Class Piano I

Class instruction in piano for students who have had no previous experience at the piano. Fundamentals of music reading and keyboard technique.
1 Cr. Fall | Spring

MUSP 102 Class Piano II

Class instruction in piano for students who have limited keyboard experience.
Prereq.: MUSP 101 or ability to read treble and bass clef, ability to play simple pieces with both hands together. 1 Cr. Fall | Spring

MUSP 103 Class Voice

Class instruction in voice for beginning students. Fundamentals and practical application of vocal techniques.
1 Cr. Fall | Spring

MUSP 105 Class Guitar I

Class instruction in guitar for those with little or no previous experience playing the guitar. Fundamentals of music reading and guitar technique. May be repeated up to 4 credits.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Perform simple musical literature with a guitar.
2. Identify the basic components of music theory, including guitar tablature.
3. Demonstrate basic guitar technique, coordinating between the left and right hands.
4. Differentiate stylistic variations in music from other cultures, as well as their own.

MUSP 106 Class Guitar II

Class instruction in guitar for students with limited guitar experience.
Prereq.: MUSM 105 1 Cr. Fall | Spring

Student Learning Outcomes

1. Perform simple musical literature with a guitar.
2. Identify the basic components of music theory, including guitar tablature.
3. Demonstrate intermediate guitar technique, coordinating between the left and right hands.
4. Differentiate stylistic variations in music from other cultures, as well as their own.

MUSP 110 Piano

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 112 Organ

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 114 Harpsichord

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 116 Voice

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 118 Percussion

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 120 Violin

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 122 Viola

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 124 Cello

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 126 Bass

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 128 Guitar

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 130 Trumpet

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 132 French Horn

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 134 Trombone-Baritone

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 136 Private Lessons: Jazz Improvisation

Individualized jazz instruction for instrumentalists. May be repeated up to 4 times for a maximum of 8 credits. Permission of instructor.
Coreq.: 1-2 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 138 Tuba

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 140 Flute-Piccolo

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 142 Oboe-English Horn

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 144 Clarinet-Bass Clarinet

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 146 Saxophone

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 148 Bassoon

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 151 Vocal Ensemble

1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 152 String Ensemble

1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 153 Brass Ensemble

1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 154 Woodwind Ensemble

1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 155 Percussion Ensemble

1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 156 Chamber Ensemble

1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 157 Jazz Ensemble

1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 158 Studio Jazz Band

Study and performance organization utilizing standard large jazz band instrumentation and literature from the jazz and popular idioms. By permission only. May be repeated for credit.
1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 159 World Drumming Group

Listening, examination and performance of drumming traditions from a diversity of cultural backgrounds. May be repeated for credit.
1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

MUSP 161 Women's Choir

Rehearsal and performance of traditional choral music including classical music, world/multicultural music, and jazz/show/pop music. Development of vocal technique. Placement interview with director required. May be repeated for credit.
1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 162 Concert Choir

May be repeated for credit. Audition required.
1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 163 Men's Choir

Rehearsal and performance of traditional male chorus literature including classical music, world/multicultural music and contemporary music. Development of musicianship skills and vocal technique.
1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 164 Wind Ensemble

May be repeated for credit. Audition required.
1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 165 Chamber Winds

May be repeated for credit. Audition required.
1 Cr. DEMAND

MUSP 166 Campus Band

May be repeated for credit.
1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 167 University Orchestra

May be repeated for credit.
1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 168 Husky Sports Band

Music performance ensemble for on and off-campus athletic games and community events. May be repeated for a maximum of 6 credits.
Coreq.: 0-1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 210 Piano

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of piano technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 212 Organ

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of organ technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 214 Harpsichord

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of harpsichord technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 216 Voice

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of voice technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 218 Percussion

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of percussion technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 220 Violin

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of violin technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 222 Viola

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of viola technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 224 Cello

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of cello technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through

the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 226 Bass

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of bass technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 228 Guitar

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of guitar technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 230 Trumpet

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of trumpet technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 232 French Horn

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of French horn technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 234 Trombone-Baritone

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of trombone-baritone technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.

6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 236 Private Lessons: Jazz Improvisation

Individualized jazz instruction for instrumentalists. May be repeated up to 4 times for a maximum of 8 credits. Permission of instructor.
Coreq.: 1-2 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of Jazz Improvisation technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 238 Tuba

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of tuba technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 240 Flute-Piccolo

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of flute-piccolo technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 242 Oboe-English Horn

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of Oboe-English horn technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 244 Clarinet-Bass Clarinet

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate clarinet-bass clarinet stylistic concepts appropriate to the intermediate level through live performance.
2. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
3. Analyze compositions musically and when appropriate, textually.

4. Demonstrate aural differentiation through critical review of live performances.
5. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 246 Saxophone

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of saxophone technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 248 Bassoon

Coreq.: 1-3 Cr.

Student Learning Outcomes
1. Apply principles of bassoon technique and musicianship appropriate to the intermediate level in the performance of music from diverse styles and time periods.
2. Demonstrate stylistic concepts appropriate to the intermediate level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 303 Functional Piano for Music Teachers

Theoretical, technical and pedagogical skills for using piano in teaching and conducting.

Prereq.: MUSP 102 or equivalent experience. 1 Cr. Fall | Spring

MUSP 304 Piano for Vocal and Choral Specialists

Advanced theoretical, technical and pedagogical skills for using piano in teaching choral music. Can be repeated for a maximum of 3 credits but only 1 credit counts in major.
Prereq.: MUSP 303 or consent of instructor 1 Cr. DEMAND

MUSP 310 Piano

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 312 Organ

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.

6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 314 Harpsichord

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 316 Voice

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 318 Percussion

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 320 Violin

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 322 Viola

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level

through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 324 Cello

Coreq.: 1-3 Cr.

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 326 Bass

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 328 Guitar

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 330 Trumpet

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 332 French Horn

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 334 Trombone-Baritone

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 336 Private Lessons: Jazz Improvisation

Individualized jazz instruction for instrumentalists. May be repeated up to 4 times for a maximum of 8 credits. Permission of instructor.
Coreq.: 1-2 Cr. Fall | Spring

MUSP 338 Tuba

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 340 Flute-Piccolo

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 342 Oboe-English Horn

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.

2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 344 Clarinet-Bass Clarinet

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 346 Saxophone

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 348 Bassoon

Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Demonstrate aural differentiation through critical review of live performances.
6. Synthesize theoretical and technical skills through the demonstrated ability to perform improvisations of varying lengths and styles.

MUSP 350 Diction for Singers

German, Italian and French lyric diction for singers using the International Phonetic Alphabet.
3 Cr. DEMAND

MUSP 353 Brass Ensemble

Brass literature and small group performance skills.
Prereq.: MUSP 153 1 Cr. DEMAND

MUSP 355 Percussion Ensemble

Study and performance of advanced percussion ensemble literature, including conducting and preparation of standard and multicultural repertoire.
Prereq.: MUSP 155 1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 356 Chamber Ensemble

Study and performance of advanced chamber ensemble literature, including conducting and preparation of advanced repertoire. Permission of instructor. May be repeated for credit.
1 Cr. DEMAND

MUSP 357 Jazz Ensemble
Advanced study and performance of traditional and contemporary music for jazz ensemble.
Prereq.: MUSP 157 1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 358 Chamber Singers
Study and performance of chamber choral literature from the Renaissance to the present. Audition required. May be repeated up to 6 credits.
Coreq.: MUSP 162 or MUSP 362 1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

Student Learning Outcomes
1. Describe and appreciate works in the arts and humanities as expressions of individual and collective values within an intellectual, cultural, historical and social context 2. Interpret and respond critically to works from various cultures in the arts and humanities.
3. Explore intellectually the ideas expressed in works in the arts and humanities.
4. Engage in creative processes or interpretive performance.
5. Articulate an informed personal response to works in the arts and humanities.

MUSP 360 Opera Theatre
Musical dramatic study and performance of operatic roles. Consent of instructor. May be repeated to a maximum of 8 credits.
Coreq.: 1-2 Cr. DEMAND GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 362 Concert Choir
Advanced study and performance of choral music from 16th-21st century, including classical and multicultural repertoire. Annual tour.
Prereq.: MUSP 162 1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 364 Wind Ensemble
Advanced study and performance of traditional and contemporary wind band music, including classical and multicultural repertoire. Annual tour.
Prereq.: MUSP 164 1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 367 University Orchestra
Advanced study and performance of orchestral music from Baroque through modern, including performing as a string orchestra, chamber orchestra and full orchestra. Annual tour.
Prereq.: MUSP 167 1 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 373 Conducting I
Conducting principles and rehearsal techniques for choral and instrumental literature.
Prereq.: MUSM 202 3 Cr. Fall

MUSP 376 Intermediate Conducting and Repertoire
Continued development of clear and expressive conducting technique, score preparation, rehearsal techniques, repertoire, programming and administration of instrumental and choral music programs in schools, communities, and churches.
Prereq.: MUSP 373 3 Cr. Spring

Student Learning Outcomes
1. Conduct expressively with clear and consistent gestures.
2. Describe core repertoire appropriate for all levels of school or community and church ensembles in their area of focus (choral, band, orchestra).
3. Analyze and interpret musical scores with an understanding of technical and interpretative demands of all performers.
4. Demonstrate ability to rehearse effectively and efficiently, applying knowledge and research in pedagogy appropriate to instrumental or choral ensembles.
5. Describe methods for developing and administering music programs at all school levels.

MUSP 396 Junior Recital
Presentation of one-half or full recital.
1 semester applied lessons at 300 level or above
1 Cr. Fall | Spring

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the intermediate advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the intermediate advanced level through live performance.
3. Plan a musical recital for live performance.

MUSP 401 Advanced Composition
Advanced study of contemporary compositional practice. May be repeated for credit.
Prereq.: MUSM 301 Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Employ the use of large forms and structures in the composition of music.
2. Apply contemporary contrapuntal and orchestration techniques.
3. Apply professional standards to the notation and preparation of scores and parts.

MUSP 405 Keyboard Accompanying

Discussion and performance of representative keyboard accompaniments. Permission of instructor. 1 Cr. DEMAND

Student Learning Outcomes
1. Apply principles of technique and musicianship appropriate to the advanced level in the performance of collaborative keyboard music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the advanced level through live performance.
3. Integrate research skills in order to synthesize knowledge about composers and compositions into a historical and cultural context.
4. Analyze compositions musically and when appropriate, textually.
5. Apply appropriate instructional strategies in a collaborative performance setting, such as a studio class or individual musical lessons.

MUSP 410 Piano

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 412 Organ

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 414 Harpsichord

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 416 Voice

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 418 Percussion

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 420 Violin

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 422 Viola

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 424 Cello

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 426 Bass

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 428 Guitar

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 430 Trumpet

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 432 French Horn

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 434 Trombone-Baritone

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 436 Private Lessons: Jazz Improvisation

Individualized jazz instruction for instrumentalists. May be repeated up to 4 times for a maximum of 8 credits.
Coreq.: 1-2 Cr. Fall | Spring

MUSP 438 Tuba

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 440 Flute-Piccolo

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 442 Oboe-English Horn

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 444 Clarinet-Bass Clarinet

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 446 Saxophone

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 448 Bassoon

Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

MUSP 496 Senior Recital

Presentation of full recital.
1 semester applied lessons at 400 level or above
2 Cr. Fall | Spring

Student Learning Outcomes

1. Apply principles of technique and musicianship appropriate to the advanced level in the performance of music from diverse styles and time periods.
2. Demonstrate understanding of stylistic concepts appropriate to the advanced level through live performance.
3. Plan a musical recital for live performance.

MUSP 497 Composition Recital

Presentation of a recital of original compositions.
Coreq.: MUSP 401 0 Cr. Fall | Spring

Student Learning Outcomes

1. Program a concert of original music.
2. Apply professional standards to the notation and preparation of scores and parts.
3. Conduct planning and rehearsal of a concert of original music in a public venue.

Nuclear Medicine Technology (NMDT)

NMDT 401 Hospital Orientation

Hospital administrative procedures including medical terms and medical ethics.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify and define basic medical terminology and medical abbreviations that will be utilized as a Nuclear Medicine Technologist.
2. Complete a scientific article search to review and summarize a scientific journal.
3. Discuss the levels, principles, styles, and philosophies of management.
4. Explain the importance of various supervisory positions.
5. Discuss professional interaction when working with patients.
6. Discuss and practice safe and proper patient transportation methods.
7. Identify the principles of continuous quality improvement.

NMDT 403 Anatomy, Physiology, and Pathology

Anatomy, physiology, and pathology of the human organ system treated in the application of nuclear medicine.
Coreq.: 1-4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify anatomical structures in organs and organ systems as they relate to nuclear medicine imaging.
2. Identify hormones associated with each organ and organ system and describe how they affect nuclear medicine imaging.
3. Explain disease and disease processes that are relevant in nuclear medicine, for all organ systems.
4. Compare and contrast various modes of cellular transportation.
5. Identify normal anatomic structures of the head and neck, chest, abdomen, and pelvis using computed tomography and nuclear medicine.

NMDT 405 Radiation Protection

Properties of alpha, beta, and gamma radiation, their effects on human beings, and methods for protecting patients and staff from unnecessary exposure and possible injury.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Describe the characteristics of radiation and define radiation measurement units.
2. Identify the agencies and interpret/comply with

the appropriate regulations associated with radiation exposure and receipt, use, and disposal of radioactive materials.
3. Define radiation exposure limits and apply safe radiation protection techniques in accordance with the ALARA philosophy.
4. Use appropriate radiation detection and monitoring equipment and evaluate readings.
5. Employ the practical and appropriate methods of radiation protection (time, distance, and shielding) and predict exposure levels based on calculations.
6. Assess a scenario and utilize proper protocols to prevent a medical event.
7. List what constitutes an error, an excess exposure, and a medical event and employ the appropriate course of action.
8. Identify and manage radioactive material spills and contamination.
9. Describe the Nuclear Medicine Technologists' role and responsibility in radionuclide therapy procedures.

NMDT 407 Clinical Instrumentation and Techniques

Structure, operating characteristics, and practice in use of nuclear radiation detection instruments and radioisotope handling devices used in medical diagnosis and therapy.
Coreq.: 1-4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Explain all quality control procedures from camera installation to everyday quality control procedures for SPECT systems.
2. Process SPECT imaging utilizing FBP and OSEM with various filters, demonstrating the characteristics of each filter.
3. Describe the origin and effect of each of the following image characteristics: background, noise, resolution loss with distance, and photon attenuation and scatter for SPECT imaging.
4. Explain attenuation correction and how it is applied to SPECT images.
5. Explain all quality control procedures from camera installation to everyday quality control procedures for PET and CT systems.
6. Identify and explain the purpose of all components of a PET/CT system.
7. Explain attenuation correction and how it is applied to and PET/CT images.
8. Compare and contrast instrumentation used for planar, SPECT, PET and CT imaging.

NMDT 409 Mathematical Evaluation of Clinical Data

Variations in results depending on the choice of radionuclide, instrument, and patient.
Coreq.: 1-2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Experiment and solve equations using mathematical techniques such as exponents, units, graphs, scientific notation, and logarithms used in nuclear medicine.
2. Use radioactive decay equations to solve problems involving isotope decay, activity, half-life, and transient equilibrium.

NMDT 411 Records and Administrative Procedures

Records and procedures required by federal, state and professional regulatory agencies to insure proper: 1) acquisition, handling, application, storage, and disposal of radioactive materials; 2) awareness of radiation dosages received by patient and staff and 3) functioning of detection equipment.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Explain and discuss proper acquisition, handling, preparation, storage, and disposal of radioactive materials in accordance with federal and state regulations and professional regulatory organization standards.
2. Explain the importance of patient and staff dose calculations.
3. Use proper techniques to assure safe and accurate use of radiation detection equipment.

NMDT 412 Clinical Nuclear Practicum I

Supervised use of radionuclides in imaging and scanning of patients for diagnostic purposes.
Coreq.: 1-9 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Use safe, proper, professional, and ethical patient care methods.
2. Practice safe and effective radiation protection techniques.
3. Select the appropriate instrumentation for imaging and non-imaging procedures, perform quality control, and set up the proper protocol for use.
4. Use the computer for processing and data analysis, perform quality control, and display the data in the appropriate format.

5. Receive, prepare, administer, and properly dispose of the appropriate radiopharmaceutical in accordance with federal regulations.
6. Use diagnostic procedures according to accepted protocol.

NMDT 413 Clinical Nuclear Practicum II

Capstone course for students electing the Nuclear Medicine Technology major. Clinical use of radionuclides in vitro and in patients for diagnostic purposes. Supervised use of radionuclides in vitro and in patients for diagnostic purposes.
Coreq.: 1-9 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Use safe, proper, professional, and ethical patient care methods.
2. Practice safe and effective radiation protection techniques.
3. Select the appropriate instrumentation for imaging and non-imaging procedures, perform quality control, and set up the proper protocol for use.
4. Use the computer for processing and data analysis, perform quality control, and display the data in the appropriate format.
5. Receive, prepare, administer, and properly dispose of the appropriate radiopharmaceutical in accordance with federal regulations.
6. Identify normal and abnormal tracer uptake and some common clinical indications that they may represent for all organ systems.
7. Use diagnostic procedures according to accepted protocol.

NMDT 415 Application of Radionuclides to Medicine

Radionuclides and the compounds into which they are formed that are useful in medical research, diagnosis, and therapy.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Determine and calculate appropriate patient doses.
2. Discuss proper preparation and storage of radioactive volatiles and gases in accordance with federal regulations.
3. Explain the normal and altered bio-distribution properties of radiopharmaceuticals.
4. Explain the characteristics, proper use, and pharmacokinetics of radiopharmaceuticals, pharmaceuticals, and contrast media.
5. Analyze patient information to determine adverse reactions, interfering drugs, and contraindications for administration for radiopharmaceuticals, pharmaceuticals, and contrast media.

NMDT 417 Nuclear Radiation Physics

Properties of alpha, beta, and gamma radiations; their origins and interactions with matter; their control and shielding; the statistics of counting.
Coreq.: 1-4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify all radioactive modes of decay and describe how they affect nuclear medicine imaging.
2. Describe how radiation is created, how it decays, and how it interacts with matter.
3. Identify gamma spectroscopy devices and the components of the energy spectrum.
4. Identify and explain the purpose of all components of a gamma camera.
5. Explain the origin and effect of each of the following image characteristics: background, noise, resolution loss with distance, and photon attenuation and scatter for planar imaging.
6. Compare and contrast all types of radiation detectors as they relate to sensitivity and efficiency.
7. Explain all quality control procedures from camera installation to everyday quality control procedures for planar systems.

NMDT 419 Clinical Radiation Biology

Cellular and organ responses to radiation sources and radionuclides in nuclear medicine.
Coreq.: 1-2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Review the characteristics and sources of different types of radiation.
2. Differentiate appropriate radiation measurements, including internal and external exposure.
3. Distinguish different types of radiation interactions with matter.
4. Identify cellular response of radiation on microscopic and macroscopic level.
5. Discuss the risk-to-benefit ratio of radiation exposure in terms of diagnostic and therapeutic nuclear medicine procedures.
6. Identify factors influencing absorbed dose to the general public and occupationally exposed workers.
7. Explain radiation hazards and use protection techniques for pregnant women and breast-feeding mothers.

NMDT 421 Therapeutic Radionuclides
Chemical, physical, and biological properties of the radionuclides used in diagnosis and therapy.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify and explain the chemical and physical properties of radionuclides.
2. Identify and explain the biological properties of radionuclides.

NMDT 423 Nuclear Medicine Chemistry
The radiopharmacology and chemistry of radionuclides used in the clinical laboratory.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Illustrate various methods of isotope production.
2. Explain the various methods used for producing artificial radionuclides, with an emphasis on the production of the radionuclides used in the nuclear medicine department.
3. Identify the different types of impurities that can be present in technetium kit preparations and how to test for each of them.
4. Explain the physics, construction, and operational aspects of a radionuclide generator (especially with respect to a Mo-99/Tc-99m generator).
5. Identify appropriate quality control procedures for Tc-99m eluate and radiopharmaceuticals, including radionuclide purity, radiochemical purity, and chemical impurities.
6. Discuss the production and characteristics of positron emitters and positron-labeled radiopharmaceuticals.
7. Explain the Food and Drug Administration and US Pharmacopeia control of pharmaceuticals and radiopharmaceuticals.

NMDT 427 Application of Computers to Nuclear Medicine
Data collection, data reduction and data enhancement by computer methods.
Coreq.: 1-4 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. List the steps to acquire images with various camera systems.
2. Identify the similarities and differences between acquisition systems and describe which parameters have the greatest impact on image quality.
3. Explain the filmless and electronic medical imaging environment in the nuclear medicine department.
4. Explain what relevant software can be used for and how it is used.

NMDT 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Use safe and appropriate techniques in nuclear medicine under supervision.
2. Integrate academic knowledge and theory with professional practice.

NMDT 499 Independent Study
Offered at the discretion of departments, this program is intended for the very able, motivated student whose intellectual needs are partially served by serious independent study.
Coreq.: 1-3 Cr. DEMAND

Nursing (NURS)

NURS 210 Introduction to Health Careers
Employment competencies required for different health careers. Personal skills, employment opportunities, ethics, legal issues, scope of practice and personal goal setting. Does not require admission to the major.
3 Cr. Fall | Spring | Summer

NURS 211 Healing, Culture, Faith and Traditions
Healing practices across cultures and traditions. Biomedical and holistic concepts of medical care. Interactions with practitioners of healing arts. Does not require admission to the major
3 Cr. Fall | Spring | Summer

NURS 301 Health, Healing, Harmony: Professional Nursing Practice
Foundation of nursing knowledge, theory and research, professional values, core competencies and knowledge.
Prereq.: Admission to the major Coreq.: NURS 302 or NURS 320 3 Cr. Fall | Spring

Student Learning Outcomes
1. Extrapolate information and views of how a baccalaureate-prepared registered nurse integrates

components of professional nursing values into practice.
2. Differentiate communication styles among different cultures.
3. Identify methods of communication that enhances and contributes to culturally congruent nursing care.
4. Express an understanding of the origins of the nursing profession.
5. Demonstrate application of nursing theories and their relevance to the student's nursing practice.
6. Discuss the contributions of theory and research based knowledge from the arts, humanities and sciences to the foundation of professional nursing theory and practice.
7. Articulate an understanding of the discipline of nursing.
8. Describe the utilization of principles of critical thinking in assessment and planning of client-centered care.
9. Demonstrate application of caring and therapeutic communication in planning client centered care.
10. Discuss examples of nursing research and evidence based practice as applied in primary, secondary and tertiary levels of care across all populations and environments.

NURS 302 Professional Nurse (Clinical)

Principles of intermediate nursing care for clients in laboratory and community settings.
Prereq.: Admission to the major Coreq.: NURS 301
3 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate theory and research-based knowledge and skill from the arts, sciences, humanities, informatics, and genetics to professional nursing practice.
2. Apply principles of critical thinking using the nursing process and current evidence-based practice to formulate clinical decisions.
3. Design beginning level outcome based plans of care for clients in secondary and tertiary levels of care across populations in all stages of life.
4. Apply appropriate knowledge of functional health patterns and cultural diversity in performing nursing interventions in a rapidly changing, global society.
5. Integrate ANA Standards of Clinical Nursing Practice in care of individuals.
6. Demonstrate communication techniques during assessment, intervention, evaluation and health promotion.
7. Use appropriate communication patterns with the designated interdisciplinary healthcare team.
8. Plan collaboration with inter-professional teams in providing patient care.

NURS 303 Holistic Health Assessment

Assessment of the whole individual across the lifespan considering physical, emotional, spiritual, and cultural factors utilizing therapeutic communication, physical examination, and health promotion techniques.
Prereq.: NURS 301, NURS 302 or NURS 320, NURS 304, NURS 308, NURS 316 3 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate concepts from the arts, sciences and humanities in the comprehensive assessment of individual harmony. (Regional Write-ups).
2. Apply the principles of assessment observing cultural considerations throughout the life cycle across all environments. (In class scenarios).
3. Utilize critical thinking when providing a comprehensive focused assessment of the individual (Benchmark/MBNA).
4. Demonstrate therapeutic communication in performance of comprehensive assessment (Benchmark/MBNA).
5. Discuss the contribution of comprehensive assessment to achievement of personal health care as well as health care improvements for all. (Personal Portfolio).
6. Identify the relationship of professional values, ethics and standards in assessment across the lifespan and all populations.

NURS 304 Professional Nursing Skills

Application of technical skills in a simulated health care delivery setting. Permission of department.
Prereq.: Admission to the major 2 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate evidence-based knowledge from the arts, sciences and humanities in the performance of fundamental technical skills.
2. Formulate an awareness of individual, cultural and ethnic differences (across the lifespan) in the performance of fundamental skills.
3. Demonstrate caring behaviors in the performance of skills.
4. Evaluate the effect nursing skills have on promoting harmony in clients.
5. Develop a beginning understanding of the ANA Standards of Clinical Practice and legal responsibilities as they relate to skills performance.
6. Use critical thinking during the performance of

nursing skills.
7. Demonstrate personal and professional growth in the laboratory setting.

NURS 305 Nursing Law and Ethics

Legal and ethical issues of professional nursing practice.
Prereq.: NURS 303, NURS 306, NURS 307, NURS 309, NURS 310 or NURS 322, NURS 317 2 Cr. Fall | Spring

Student Learning Outcomes

1. Apply nursing history, nursing theory, ethical theories and principles into the practice of legal and ethical nursing practice.
2. Use value clarification and self-awareness in nursing situations to provide culturally diverse, high quality, and safe patient care.
3. Use legal and ethical decision-making models, including the ANA Code of Ethics, to address the needs of individuals and families in all stages of life.
4. Integrate knowledge of the Nurse Practice Act, licensing, legal regulations, and law into legal and ethical nursing practice.
5. Examine ethical principles as they relate to health care delivery systems, health policy issues, economic issues and social issues today.
6. Comprehend the ethics inherent in the principled behavior of a professional nurse.
7. Apply the ethics of advocacy to enable nurse and patient empowerment.
8. Integrate the professional values of caring, altruism, autonomy, human dignity, integrity, and social justice into ethical nursing practice.

NURS 306 Nursing Care of Older Adults

Care of older adults across multiple environments. Psychosocial, spiritual, and biophysical changes of aging, quality of life, human dignity, and autonomy issues.
Prereq.: NURS 301, NURS 302 or NURS 320, NURS 304, NURS 308, NURS 316 Coreq.: NURS 307 2 Cr. Fall | Spring

Student Learning Outcomes

1. Assess developmental, biological, genetic, psychological, social and cultural factors on the functional health behaviors and patterns of older adults.
2. Develop knowledge, skills, and sensitivity related to history taking, interviewing, and therapeutic communication with older adults in various stages of health and harmony.
3. Identify and utilize evidence-based interventions to assist older adults to cope and restore harmony resulting from psychological, physical, social, cultural, and spiritual imbalance.
4. Demonstrate skill in the use of patient care technologies, including electronic health records, community and electronic resources on aging, as part of the provision of safe and ethical nursing care to older adults.
5. Examine current and emerging health care policies, including financial and regulatory, which influence delivery of health care to older adults.
6. Analyze the benefits of a collaborative interdisciplinary care team working with older adults in providing safe, quality care in different care environments and living arrangements.
7. Integrate professional nursing knowledge about health promotion, risk reduction, disease prevention, and illness management for older adults, including ethnic elders who are at higher risk for health disparities.
8. Analyze actual or potential ethical issues related to quality of life for older adults such as: autonomy, human dignity, restraint use, and vulnerabilities for abuse and maltreatment, and advocate for safe, fair, and ethical healthcare for older adults.

NURS 307 Nursing Care of Older Adults (Clinical)

Applies theoretical principles of NURS 306. Nursing care of older adults across multiple environments.
Prereq.: NURS 301, NURS 302 or NURS 320, NURS 304, NURS 308, NURS 316 Coreq.: NURS 306 2 Cr. Fall | Spring

Student Learning Outcomes

1. Assess developmental, biological, genetic, psychological, social and cultural factors on the functional health behaviors and patterns of older adults.
2. Develop knowledge, skills, and sensitivity related to history taking, interviewing, and therapeutic communication with older adults in various stages of health and harmony.
3. Identify and utilize evidence-based interventions to assist older adults to cope and restore harmony resulting from psychological, physical, social, cultural, and spiritual imbalance.
4. Demonstrate skill in the use of patient care technologies, including electronic health records, community and electronic resources on aging, as part of the provision of safe and ethical nursing care to older adults.
5. Examine current and emerging health care policies, including financial and regulatory, which

influence delivery of health care to older adults.
6. Analyze the benefits of a collaborative interdisciplinary care team working with older adults in providing safe, quality care in different care environments and living arrangements.
7. Integrate professional nursing knowledge about health promotion, risk reduction, disease prevention, and illness management for older adults, including ethnic elders who are at higher risk for health disparities.
8. Analyze actual or potential ethical issues related to quality of life for older adults such as: autonomy, human dignity, restraint use, and vulnerabilities for abuse and maltreatment, and advocate for safe, fair, and ethical healthcare for older adults.

NURS 308 Nursing Informatics

Health care technologies for discovering, retrieving, and using information in nursing practice. Permission of department.
Prereq.: Admission to the major 2 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze the use of computers, PDAs, electronic health records, and other existing and emerging technology in nursing and healthcare.
2. Demonstrate skill in accessing, utilizing, and critiquing on-line professional nursing and health care literature, including evidence-based practice sites, and integrate into safe, quality patient care.
3. Examine patient care technologies, information systems, and communication devices that support safe nursing practice in a variety of settings.
4. Demonstrate proficiency at the 'beginning nurse' level of nursing informatics competencies.
5. Examine regulatory issues, including privacy and security data standards, to ensure safe, legal utilization of technology in multiple health care environments.
6. Analyze nurses' use of technology such as IPods, EHRs, and other information systems to communicate and collaborate with interdisciplinary teams in the provision of safe patient care.
7. Examine the impact of healthcare technology, including telehealth, on rural and underserved populations.
8. Utilize the ANA Code of Ethics for Nurses and HIPAA as frameworks for maintaining professional boundaries, including confidentiality, privacy, and security of patient data.

NURS 309 Holistic Adult Care: Physiological Wellness

Illness and disease management of individuals in acute disharmony. Social, physical, psychological, and spiritual responses of the individual and appropriate nursing interventions.
Prereq.: NURS 301, NURS 302 or NURS 320, NURS 304, NURS 308, NURS 316 Coreq.: NURS 310 or NURS 322 3 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate theory and research-based knowledge from the arts, sciences, humanities, Informatics and genetics to develop a foundation in medical/surgical nursing practice and lifelong learning.
2. Demonstrate leadership and communication skills of patients in acute disharmony to effectively implement patient safety and quality improvement initiatives within the context of the interprofessional team.
3. Apply principles of critical thinking using case study methods in the provision of holistic evidence-based care with application into clinical practice.
4. Identify data from all relevant sources, including information technology, to inform and improve the quality in the delivery of patient care.
5. Develop a beginning awareness of resource stewardship when discussing the implementation of nursing care and the regulatory environments on patient care quality of various clients in acute disharmony.
6. Develop knowledge of effective therapeutic communication, advocacy, and collaborative skills to enhance the delivery of research based, evidence-based quality patient care of patients in disharmony.
7. Assess the current knowledge base of the patient related to their care needs during acute disharmony and develop an individualized education plan.
8. Recognize the impact of professional standards and values on the quality of life for patients experiencing acute disharmony.

NURS 310 Physiologic Wellness (Clinical)

Applies theoretical principles of 309. Development of concept maps and application of advanced technical skills in caring for adults experiencing acute disharmony in various health care settings.
Prereq.: NURS 301, NURS 302 or NURS 320, NURS 304, NURS 308, NURS 316 Coreq.: NURS 309 3 Cr. Fall | Spring

Student Learning Outcomes

1. Utilize theory and research-based knowledge and skill from the arts, sciences, humanities, informatics and genetics to manage adults in acute disharmony.

2. Provide high quality, safe patient care through quality improvement by participating in simulation exercises and completing an individualized plan of care for the patient in acute disharmony.
3. Apply critical thinking in the provision of holistic evidenced based care by participating in simulation exercises along with concept mapping when caring for clients in acute disharmony.
4. Integrate knowledge and skills in patient care technology by utilizing an IPOD Touch to research medications and access lab and diagnostic information when caring for patients in acute disharmony.
5. Review healthcare policies prior to performing a procedure on a patient in the clinical setting in order to provide high quality, safe patient care.
6. Establish and maintain effective interaction with patients and interdisciplinary care team members in the clinical setting.
7. Contribute to individual health by participating in patient teaching for clients in acute disharmony.
8. Incorporate professional nursing standards and standards of professional performance in the practice of nursing for clients in the medical/surgical setting.

NURS 311 Mental Health Nursing

Etiology of mental illness, substance abuse and dependence. Mental health promotion, illness management, disease prevention, and psychosocial rehabilitation.
Prereq.: NURS 303, NURS 306, NURS 307, NURS 309, NURS 310 or NURS 322, NURS 317 Coreq.: NURS 312 or NURS 323 2 Cr. Fall | Spring

Student Learning Outcomes

1. Utilize informatics to increase knowledge and critical thinking skills related to assessment, outcomes and interventions for a variety of mental health disorders.
2. Integrate theory and research-based knowledge from the sciences, arts and humanities in understanding the role of genetics, culture, race, gender, and trauma on mental health and the prevalence of mental illness.
3. Apply knowledge of evidence-based, culture-specific therapeutic nursing interventions for individuals, families and groups with mental health needs.
4. Examine the role of nurses in the interdisciplinary provision of mental health promotion, disease prevention, illness management and psychosocial rehabilitation programs.
5. Apply therapeutic relationship knowledge to promote, maintain, or restore adaptive coping and positive growth.
6. Examine the influence of socio-political, legal and economic factors on the access and outcomes of mental health and psychiatric services.
7. Examine the role, function and boundaries of nursing practice as defined in the ANA (2000) Scope and Standards of Psychiatric-Mental Health Nursing Practice and the ANA (2001) Code of Ethics for Nurses.

NURS 312 Mental Health (Clinical)

Clinical experiences with individuals, families and groups in hospital and community-based settings.
Prereq.: NURS 303, NURS 306, NURS 307, NURS 309, NURS 310 or NURS 322, NURS 317 Coreq.: NURS 311 or NURS 323 3 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate concepts and principles from the arts, sciences, humanities with nursing theory to provide holistic, culturally sensitive nursing care for clients with mental, emotional, cognitive and behavioral problems.
2. Apply clinical reasoning skills in designing, implementing and revising evidence-based nursing care for clients.
3. Use communication skills effectively with members of the interdisciplinary team, the client and family in coordinating mental health care needs across multiple settings.
4. Apply therapeutic relationships with clients to improve, maintain or restore adaptive coping, health, and well-being.
5. Collaboratively practice with mental health and nursing professionals to promote awareness of mental health and nursing issues through political activism and community education.
6. Utilize the ANA Code of Ethics for Nurses, and Scope and Standards of Psychiatric-Mental Health Nursing Practice as standards for providing holistic nursing care for clients.

NURS 314 Child and Family Nursing

Core knowledge, skill, and professional values to provide and design holistic, culturally sensitive, evidence-based nursing care for families and children.
Prereq.: NURS 303, NURS 306, NURS 307, NURS 309, NURS 310 or NURS 322, NURS 317 Coreq.: NURS 315 or NURS 324 3 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate theories and concepts from liberal education into nursing practice of childbearing women, children, and their families.
2. Demonstrate professionalism in the provision of culturally sensitive care for childbearing women, children and their families.
3. Use evidence-based nursing practices in order to achieve the desired goals and outcomes for women, children, and their families.
4. Demonstrate an awareness of the influence of economic issues and healthcare policies on the health of childbearing women, children, and their families.
5. Use 'inter' and 'intra' professional communication and collaboration into nursing care of childbearing women, children, and their families.
6. Assess protective and predictive factors which influence the health of childbearing women, children, and their families.
7. Integrate professional values of autonomy, human dignity, and integrity into care of childbearing women, children and their families.

NURS 315 Child and Family Nursing (Clinical)

Builds on the theoretical base of NURS 314. Planning and implementation of nursing care during labor and delivery and for children from infancy to adolescence including physiologic and psychological development with clinical experience.
Prereq.: NURS 303, NURS 306, NURS 307, NURS 309, NURS 310 or NURS 322, NURS 317 Coreq.: NURS 314
3 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate theories and concepts from liberal education into clinical nursing practice of childbearing women, children, and their families.
2. Demonstrate professionalism in the provision of safe and effective clinical care of childbearing women, children, and their families.
3. Integrate evidence, clinical judgment, and patient preference into planning, implementing, and evaluating outcomes of nursing care for childbearing women, children, and their families.
4. Use the electronic health record to retrieve and document nursing care for childbearing women, children, and their families.
5. Identify clinical situations in which childbearing women, children, and families are underserved or vulnerable due to economic issues and/or healthcare policies.
6. Use 'inter' and 'intra' professional communication and collaboration skills in the provision of nursing care to childbearing women, children, and their families.
7. Use health education to promote the health and wellness of childbearing women, children, and their families.
8. Integrate professional values of autonomy, human dignity, and integrity into the clinical care of childbearing women, children and their families.

NURS 316 Pathophysiology for Nursing Majors

Disruptions in normal physiologic function in individuals, primarily adults. Objective and subjective manifestations of common illnesses. Majors Only.
Prereq.: Admission to the major 3 Cr. Fall | Spring

Student Learning Outcomes

1. Utilize knowledge of the normal cell structure and function relating to levels of adaptation in selected disease processes.
2. Apply principles of normal anatomy and physiology of human body systems to the pathophysiologic processes of common health problems.
3. Apply aspects of the disease process (etiology, pathogenesis, and clinical manifestations) toward alterations of specific body systems.
4. Discuss clinical manifestations of selected disease processes and health problems.
5. Examine the body's adaptive and compensatory mechanisms to pathologic changes.
6. Explore genetic principles and concepts applicable to pathophysiology.
7. Discuss the nurse's role and responsibility for assessment of individuals experiencing health problems that result in pathophysiological alterations.
8. Discuss the impact of physiological alterations on aging.

NURS 317 Pharmacology in Nursing

Principles of pharmacology and their relationship to patient centered care. Included are classification of drugs, basic mechanisms of drug interaction, safety and calculations for drug administration and nursing interventions.
Prereq.: NURS 301, NURS 302, NURS 304, NURS 308, NURS 316 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Apply knowledge and principles of pharmacology in designing holistic interventions for individuals,

families, communities and populations.
2. Utilize critical thinking in applying safety and the medication rights in nursing practice.
3. Use pharmacokinetics appropriately with diverse populations.
4. Incorporate related research , evidence based practice, computer technology and informatics in providing nursing care related to pharmacotherapeutics.
5. Integrate professional behaviors, interdisciplinary communication, values and standards into nursing practice.

NURS 320 Accelerated Nursing Professional Nurse (Clinical)

Specialized clinical experience in a nontraditional format. Applies the theoretical principles of intermediate nursing care for clients in laboratory and community settings.
Coreq.: NURS 301 3 Cr. Fall | Spring | Summer

NURS 321 Accelerated Nursing: Nursing Care of Older Adults (Clinical)

Specialized clinical experience in a nontraditional format. Applies theoretical principles of NURS 306. Nursing care of older adults.
Coreq.: NURS 306 3 Cr. Fall | Spring | Summer

NURS 322 Accelerated Nursing: Physiologic Wellness (Clinical)

Specialized clinical experience in a nontraditional format. Applies theoretical principles of NURS 309. Concept maps and advanced technical skills in caring for adults experiencing acute disharmony in variuous health care settings.
Coreq.: NURS 309 3 Cr.

NURS 323 Accelerated Nursing: Mental Health (Clinical)

Specialized clinical experience in a nontraditional format. Builds on the theoretical base of NURS 311. Clinical experiences with individuals, families, and groups in hospital and community-based settings.
Coreq.: NURS 311 3 Cr. Fall | Spring | Summer

NURS 324 Accelerated Nursing: Child and Family Nursing (Clinical)

Specialized clinical experience in a nontraditional format. Builds on the theoretical base of NURS 314. Nursing care during labor and delivery and for children from infancy to adolescence including physiologic and psychological development with clinical experience in various settings.
Coreq.: NURS 314 3 Cr. Fall | Spring | Summer

NURS 401 Holistic Adult Care Advanced Concepts

Collaborative role of the nurse in holistic nursing care for individuals and families experiencing critical, chronic, and/or terminal illness. Physical and psychological support to clients and families coping with loss, death, and chronic pain. Quality of life issues and the meaning of chronicity.
Prereq.: NURS 305, NURS 311, NURS 312 or NURS 323, NURS 314, NURS 315 or NURS 324 Coreq.: NURS 402 or NURS 420 3 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate theory and research-based knowledge from the arts, sciences, humanities, informatics, and genetics into professional nursing practice to design nursing systems for clients experiencing disharmony of a critical, chronic and/or terminal nature.
2. Integrate theory and research-based knowledge from the arts, sciences, humanities, informatics, and genetics into professional nursing practice to design nursing systems for clients experiencing disharmony of a critical, chronic and/or terminal nature.
3. Utilize critical thinking in the development of holistic, evidenced-based plans that are culturally and ethnically sensitive and address the needs of the individuals, and families who are experiencing alterations of a critical, chronic, and/or terminal nature.
4. Integrate knowledge and skills in information management and patient care technology to identify and plan care for clients experiencing alterations of a critical, chronic, and/or terminal nature.
5. Examine how health care policy, including financial and regulatory environments influences the delivery of high quality and safe patient-centered care for clients experiencing alterations of a critical, chronic, and/or terminal nature.
6. Describe how inter-professional teams coordinate and communicate in the care of clients experiencing alterations of a critical, chronic, and/or terminal nature.
7. Identify how improvements in individual and population health through health promotion and disease prevention can be provided when caring for clients experiencing alterations of a critical, chronic, and/or terminal nature.
8. Identify how professional values of altruism, autonomy, human dignity, integrity and social justice can be integrated into a personal philosophy of nursing practice with caring at the core when caring

for clients experiencing alterations of a critical, chronic, and/or terminal nature.

NURS 402 Holistic Adult Care: Advanced Concepts (Clinical)

Clinical component, including care of clients, experiencing a critical illness, chronic medical illness, and terminal illness in a variety of clinical settings. Prereq.: NURS 305, NURS 311, NURS 312 or NURS 323, NURS 314, NURS 315 or NURS 324 Coreq.: NURS 401 3 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate theory and research-based knowledge from the arts, sciences, humanities, informatics and genetics into professional nursing practice to design nursing systems for clients experiencing disharmony of a critical, chronic and/or terminal nature.
2. Apply leadership skills to practice in a culturally diverse, rapidly changing, global society, and to provide high quality and safe patient care to clients experiencing alterations of a critical, chronic, and/or terminal nature through quality improvement.
3. Utilize critical thinking in the provision of holistic, evidenced-based practice including integrative health that is culturally and ethnically sensitive and addresses the needs of the individuals, and families who are experiencing alterations of a critical, chronic, and/or terminal nature.
4. Integrate knowledge and skills in information management and patient care technology to care for clients experiencing alterations of a critical, chronic, and/or terminal nature.
5. Examine how healthcare policy, including financial and regulatory environments influences the delivery of high quality and safe patient-centered care for clients experiencing alterations of a critical, chronic, and/or terminal nature.
6. Communicate and collaborate with inter-professional teams in the care of clients experiencing alterations of a critical, chronic, and/or terminal nature.
7. Contribute to improvements in individual and population health through health promotion and disease prevention when caring for clients experiencing alterations of a critical, chronic, and/or terminal nature.
8. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice with caring at the core when caring for clients experiencing alterations of a critical, chronic, and/or terminal nature.

NURS 403 Research in Nursing Practice

Basic concepts, processes, and applications of nursing research. Research role of the nurse in decision making and clinical practice. Fulfills the upper division writing requirement. Prereq.: NURS 305, NURS 311, NURS 312 or NURS 323, NURS 314, NURS 315 or NURS 324 3 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate the foundational preparation from the arts, sciences, humanities, informatics and nursing science into research-based nursing practice.
2. Identify the baccalaureate nurse role in research and evidence-based practice.
3. Read and analyze research critically in order to address the needs of patients in all stages of life.
4. Construct a literature search and review of literature for an identified clinical problem requiring further investigation.
5. Evaluate the importance of evidence-based practice in an effort to contain costs, provide for resource stewardship, and contribute to health care improvements.
6. Prescribe methods to foster dissemination, clinical application, and utilization of research findings in the provision of evidence-based patient-centered care.
7. Contribute to improvements of individual and population health through a commitment to the advancement of nursing science through scholarly dialogue and application of research in clinical nursing practice.
8. Analyze the ethical principles that are important in conducting research as well as utilizing research findings on human subjects.

NURS 404 Health Care of Populations

Synthesize nursing and public health theory to promote and protect the health of populations through systematic assessment, planning, intervention and evaluation. Public health values, research, and collaborative activities. Prereq.: NURS 305, NURS 311, NURS 312 or NURS 323, NURS 314, NURS 315 or NURS 324 Coreq.: NURS 405 or NURS 422 2 Cr. Fall | Spring

Student Learning Outcomes

1. Apply knowledge and principles of public health nursing in designing holistic interventions for families, communities, and populations.
2. Utilize critical thinking to evaluate the availability, accessibility, acceptability, quality, and effectiveness of nursing practice for population groups.

3. Develop knowledge and skills to collaborate effectively with representatives of culturally diverse population groups and other health and human service professionals and organizations in promoting the health of the population.
4. Develop knowledge and skills to communicate effectively with representatives of diverse population groups, health and human service professionals and organizations in providing for, designing, and promoting population health.
5. Contribute to health care improvements through the planning and delivery of population-based health services to communities.
6. Analyze the importance social justice in advocacy for health and social policy, and delivery of public health programs to promote, preserve and influence the health and harmony of the population.
7. Incorporate related research; evidence based practice, computer technology, and informatics in providing nursing care for communities and populations.
8. Integrate professional behaviors, values standards into nursing practice.

NURS 405 Health Care of Populations (Clinical)

Builds on the theoretical base of NURS 404. Planning and implementing nursing care for individuals, families, and aggregates in public health agencies, schools, and other community settings.
Prereq.: NURS 305, NURS 311, NURS 312 or NURS 323, NURS 314, NURS 315 or NURS 324 Coreq.: NURS 404 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply public health principles, theory and research-based knowledge into professional nursing practice.
2. Be prepared to practice in a culturally diverse, rapidly changing, global society, who are engaged in professional development.
3. Utilize critical thinking in the provision of holistic, evidenced-based public health practice including integrative health that is culturally and ethnically sensitive and addresses the needs of the individuals, families, groups, and communities.
4. Integrate knowledge and skills in information management and technology in providing nursing care for individuals, communities and populations.
5. Examine health care policy including regulatory environments to influence population health.
6. Contribute to improvements in individual and population health though health promotion and disease prevention to urban, rural and/or underserved communities.
7. Collaborate and communicate effectively with representatives of diverse population groups and other interprofessional teams in designing, providing and promoting the health of populations.
8. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice.

NURS 406 Nursing Leadership and Management

Synthesis of previous learning and its application. Transition to leadership/manager of health care. Application of management and leadership theories and principles in professional nursing practice.
Prereq.: NURS 401, NURS 402 or NURS 420, NURS 403, NURS 404, NURS 405 or NURS 422 Coreq.: NURS 411 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply theory and research-based knowledge and skill from the arts, sciences, humanities, informatics and genetics into professional nursing practice.
2. Practice as a nurse leader in a culturally diverse, rapidly changing, global society, and engage in professional development to provide highest quality and safe patient care through quality improvement.
3. Apply leadership theories to nursing practice utilizing critical thinking skills.
4. Integrate knowledge and skills in information management and patient care technology into nursing practice through leadership activities.
5. Examine healthcare policy, including financial and regulatory environments and be able to take action to influence the delivery of high quality and safe patient-centered care.
6. Communicate and collaborate with interprofessional teams in the design, management and provision of safe, evidence based, patient-centered care.
7. Formulate goals for professional practice and leadership development that may occur in a variety of health care settings.
8. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice with caring at the core.

NURS 408 Nursing Capstone Seminar

Integration and synthesis of core knowledge, professional standards and values with core competencies in professional nursing.
Prereq.: NURS 401, NURS 402 or NURS 420, NURS

403, NURS 404, NURS 405 or NURS 422 1 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate theory and research-based knowledge and skill from the arts, sciences, humanities, informatics and genetics into professional nursing practice.
2. Prepare nurse leaders to practice in a culturally diverse, rapidly changing, global society, who are engaged in professional development to provide highest quality and safe patient care through quality improvement.
3. Utilize critical thinking in the provision of holistic, evidence-based practice including integrative health that is culturally and ethnically sensitive and addresses the needs of individuals, families, groups, communities and populations in all stages of life.
4. Integrate knowledge and skills in information management and patient care technology into nursing practice.
5. Examine healthcare policy, including financial and regulatory environments to influence the delivery of high quality and safe patient-centered care.
6. Communicate and collaborate with interprofessional teams in the design, management and provision of safe, evidence based, patient-centered care.
7. Contribute to improvements in individual and population health through health promotion and disease prevention including the rural and underserved communities.
8. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice with caring at the core.

NURS 411 Nursing Leadership Capstone Practicum

Final clinical immersion of core knowledge, professional standards, and values to aid in transition into the professional nursing role.
Prereq.: NURS 401, NURS 402 or NURS 420, NURS 403, NURS 404, NURS 405 or NURS 422 Coreq.: NURS 406 6 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate theory and research-based knowledge and skill from the arts, sciences, humanities, informatics and genetics into professional nursing practice.
2. Students will be prepared to practice in a culturally diverse, rapidly changing, global society, who are engaged in professional development to provide highest quality and safe patient care through quality improvement.
3. Utilize critical thinking in the provision of holistic, evidence-based practice including integrative health that is culturally and ethnically sensitive and addresses the needs of individuals, families, groups, communities and populations in all stages of life. Utilize critical thinking skills in the development of leadership theories and application to nursing practice.
4. Integrate knowledge and skills in information management and patient care technology into nursing practice including leadership activities.
5. Examine healthcare policy, including financial and regulatory environments to influence the delivery of high quality and safe patient-centered care.
6. Communicate and collaborate with interprofessional teams in the design, management and provision of safe, evidence based, patient-centered care.
7. Contribute to improvements in individual and population health through health promotion and disease prevention including the rural and underserved communities.
8. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice with caring at the core.

NURS 413 Cross Cultural Nursing and Global Health

Knowledge, values and skills for competent care across cultures.
Prereq.: NURS 401, NURS 402 or NURS 420, NURS 403, NURS 404, NURS 405 or NURS 422 2 Cr. Fall | Spring

Student Learning Outcomes

1. Integrate theory from the sciences and humanities in examining the impact of race, ethnicity, gender, and socio-economic status on health practices, health outcomes, and health care access for people around the world.
2. Develop knowledge and awareness of the cultural beliefs and values needed to promote health, well-being and culturally competent care and healing.
3. Critically examine HIV/AIDS, immigrant and refugee health, trauma, torture and violence as local, national and global public health problems.
4. Utilize informatics to increase knowledge of cross-cultural and global health and to identify relevant internet resources.

5. Discuss the role of local, state, national, and international health policy, human rights and humanitarian organizations in addressing health needs of people around the world.
6. Discuss the role of local, state, national, and international health policy, human rights and humanitarian organizations in addressing health needs of people around the world.
7. Contribute to improvements in individual and population health through research, design, and implementation of disparity projects that promote health in rural and underserved communities.
8. Integrate social justice into a personal philosophy of nursing practice while exploring current issues in global health.

NURS 414 Role Transition to BS

Essentials of baccalaureate nurse practice. Majors only. Online only.
Coreq.: NURS 415, NURS 417 4 Cr. Fall

Student Learning Outcomes

1. Integrate nursing theories and concepts with the liberal education into nursing practice.
2. Discuss specific concepts related to culture such as diversity, race, ethnicity, religion, and assimilation.
3. Integrate evidence, clinical judgment, and patient preferences in planning, implementing, and evaluating outcomes of care.
4. Demonstrate skills in using patient care technologies, information systems, and communication devices that support safe nursing practices.
5. Demonstrate basic knowledge of healthcare policy, finance, and regulatory environments, including local, state, national, and global healthcare trends.
6. Use inter- and intra-professional communication and collaborative skills to deliver evidence-based patient centered care.
7. Analyze the nurse's role in providing health promotion and health maintenance for patients in a variety of settings.
8. Integrate caring, professional values, ethics, and standards into personal goals for professional development and life-long learning.

NURS 415 Cross-Cultural Nursing and Global Health

Knowledge, values and skills for competent nursing care across cultures. Majors only. Online only.
Coreq.: NURS 414, NURS 417 2 Cr. Fall

Student Learning Outcomes

1. Integrate theory from the sciences and humanities in examining the impact of race, ethnicity, gender, and socio-economic status on health practices, health outcomes, and health care access for people around the world.
2. Develop knowledge and awareness of the cultural beliefs and vales needed to promote health, well-being and culturally competent care and healing.
3. Examine HIV/AIDS, immigrant and refugee health, trauma, torture and violence as local, national and global public health problems.
4. Discuss the role of local, state, national, and international health policy, human rights and humanitarian organizations in addressing health needs of people around the world.
5. Examine the International Council of Nurses Code of Ethics for Nurses and the role of ICN in the promotion of health and human rights.
6. Utilize informatics to increase knowledge of cross-cultural and global health, and to identify relevant internet resources.
7. Contribute to improvements in individual and population health through research, design, and implementation of disparity projects that promote health in rural and underserved communities.
8. Integrate social justice into a personal philosophy of nursing practice while exploring current issues in global health.

NURS 417 Scholarship for Evidence Based Practice

Relationships among theory, practice, and research. Principles and models of evidence-based practice. Research the role of the nurse in decision making and clinical practice. Majors only. Online only.
Coreq.: NURS 414, NURS 415 3 Cr. Fall

Student Learning Outcomes

1. Explain the relationships between theory, practice and research.
2. Identify nursing practice issues requiring research.
3. Practice the process of retrieval, appraisal, and synthesis of evidence to improve patient outcomes through a written review of literature.
4. Evaluate the credibility of sources of information including systematic reviews, clinical guidelines, and other synthesized evidence.
5. Evaluate the importance of evidence-based practice to influence the delivery of high quality and safe patient-centered care.
6. Integrate best evidence, clinical judgement, inter-

professional perspectives, and patient preferences through an evidence-based project.
7. Discuss mechanisms to resolve identified discrepancies between best evidence and current practice that may adversely impact patient outcomes.
8. Judge actual or potential conflicts of interest, misconduct, or the potential for harm, including those of the most vulnerable, in research situations.

NURS 418 Health Care of Populations

Synthesis of nursing and public health theory to promote and protect the health of populations through systematic assessment, planning, intervention and evaluation. Majors only. Online only.
Prereq.: NURS 414, NURS 415, NURS 417 Coreq.: NURS 428 6 Cr. Spring

Student Learning Outcomes

1. Apply public health principles, theory and research-based knowledge into professional nursing practice.
2. Practice as a leader in a culturally diverse, rapidly changing, global society, and engage in professional development.
3. Utilize critical thinking in the provision of holistic, evidenced-based public health practice including integrative health that is culturally and ethnically sensitive and addresses the needs of the individuals, families, groups, and communities.
4. Integrate knowledge and skills in information management and technology in providing nursing care for individuals, communities and populations.
5. Examine health care policy including regulatory environments and be able to influence population health.
6. Contribute to improvements in individual and population health though health promotion and disease prevention to urban, rural and/or underserved communities.
7. Collaborate and communicate effectively with representatives of diverse population groups and other interprofessional teams in designing, providing and promoting the health of populations.
8. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice.

NURS 420 Accelerated Nursing: Holistic Adult Care: Advanced Concepts (Clinical)

Specialized clinical experience in a nontraditional format. Builds on the theoretical base of NURS 401. Care of clients experiencing a critical illness, chronic medical illness, and/or terminal illness in a variety of clinical settings.
Coreq.: NURS 401 3 Cr. Fall | Spring | Summer

NURS 421 Accelerated Nursing: Nursing Leadership and Management (Clinical)

Specialized clinical experience in a nontraditional format. Builds on the theoretical base of NURS 406. Observe and participate in nurse leader/manager activities in providing health care to clients.
Coreq.: NURS 406 3 Cr. Fall | Spring | Summer

NURS 422 Accelerated Nursing: Health Care of Populations (Clinical)

Specialized clinical experience in a nontraditional format. Builds on the theoretical base of NURS 404. Planning and implementing nursing care for individuals, families, and aggregates in public health agencies, schools, and other community settings.
Coreq.: NURS 404 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Apply public health principles, theory and research-based knowledge into professional nursing practice.
2. Practice as a leader in a culturally diverse, rapidly changing, global society, and engage in professional development.
3. Utilize critical thinking in the provision of holistic, evidenced-based public health practice including integrative health that is culturally and ethnically sensitive and addresses the needs of the individuals, families, groups, and communities.
4. Integrate knowledge and skills in information management and technology in providing nursing care for individuals, communities and populations.
5. Examine health care policy including regulatory environments and be able to influence population health.
6. Contribute to improvements in individual and population health though health promotion and disease prevention to urban, rural and/or underserved communities.
7. Collaborate and communicate effectively with representatives of diverse population groups and other interprofessional teams in designing, providing and promoting the health of populations.
8. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice.

NURS 427 Nursing Ethics and Genetics

Ethical nursing practice including decision making, self-awareness of professional values, legal issues of patient care, genetics and genomics. Majors only. Online only.
Prereq.: NURS 418, NURS 428 Coreq.: NURS 429, NURS 431 3 Cr. Summer

Student Learning Outcomes

1. Apply nursing history, nursing theory, ethical theories, and principles into the practice of legal and ethical nursing practice.
2. Use value clarification and self-awareness in nursing situations to provide culturally diverse, high quality, and safe patient care.
3. Use legal and ethical decision-making models, including the ANA Code of Ethics, to address the needs of individuals and families in all stages of life.
4. Integrate knowledge of the Nurse Practice Act, licensing, legal regulations, and law into legal and ethical nursing practice.
5. Examine ethical principles as they relate to health care delivery systems, health policy issues, economic issues, and social issues today.
6. Examine ethical principles in advocacy for the rights of all clients for autonomous, informed genetic and genomic related decision making and voluntary action.
7. Integrate the professional values of caring, altruism, autonomy, human dignity, integrity, and social justice into ethical nursing practice.

NURS 428 Pharmacology and Pathophysiology Review

Principles of pharmacology and pathophysiology. Majors only. Online only.
Prereq.: NURS 414, NURS 415, NURS 417 Coreq.: NURS 418 4 Cr. Spring

Student Learning Outcomes

1. Define principles of pharmacology including development of new medications, approval processes, legal aspects, pharmacokinetics, and pharmacodynamics.
2. Describe central concepts of pathophysiology including genetics, inflammation, immunity, cellular response and others.
3. Identify general issues of safety in pharmacotherapy, psychological, sociological, and cultural factors throughout the lifespan.
4. Analyze response of human systems to adverse drug events and interactions.
5. Evaluate patient response to medications including over the counter and complementary integrative therapies.
6. Develop patient education related to medication plan adherence, patient response, effectiveness, community resources, and cost.
7. Describe pharmacological and pathophysiological responses in special populations.
8. Identify pharmacotherapy for common disorders based on pathophysiological alterations.

NURS 429 Nursing Management and Leadership

Transition from the role of staff nurse to a leader in health care. Application of management and leadership theories and principles in professional nursing practice. Majors only. Online only.
Prereq.: NURS 418, NURS 428 Coreq.: NURS 427, NURS 431 4 Cr. Summer

Student Learning Outcomes

1. Synthesize theory and research-based knowledge and skill from the arts, sciences, humanities, informatics, and genetics into professional nursing practice.
2. Demonstrate nurse leadership in a culturally diverse and global society.
3. Utilize critical thinking skills to apply leadership theories to nursing practice.
4. Integrate knowledge and skills in information management and patient care technology into nursing practice.
5. Examine healthcare policy, including financial and regulatory environments.
6. Communicate and collaborate with inter-professional teams.
7. Formulate goals for professional practice and leadership development.
8. Integrate professional values of caring, altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of nursing practice.

NURS 431 Capstone for RN-BS Completion

Synthesis of knowledge, professional standards, and values with core competencies. Majors only. Clinical and online component.
Prereq.: NURS 418, NURS 428 Coreq.: NURS 427, NURS 429 4 Cr. Summer

Student Learning Outcomes

1. Apply professional communication strategies.
2. Develop a baccalaureate nursing professional identity.
3. Participate in an inter-professional team.
4. Integrate knowledge of evaluating system issues in health care.

5. Evaluate personal nursing practice and professional accountability.

NURS 444 Internship

Observe and participate in nurse leader/manager activities on personnel providing health care to clients.
Prereq.: NURS 301 3 Cr. Summer

Student Learning Outcomes

1. Utlize the nursing process to provide safe patient care.
2. Enhance prioritization, organization and time management skills in the delivery of nursing care.
3. Report assessments and collected data in a timely manner to appropriate clinical staff.
4. Document patient care provided accurately and completely and consistent with clinical site protocols.
5. Enhance communication skills with patients, families, co-workers, and other members of the health care team.
6. Demonstrate accountability for nursing actions consistent with professional standards.
7. Demonstrate accountability for personal and professional development.
8. Apply researched-based knowledge and evidence based practice standards to patient care.

NURS 450 Readings in Nursing (Topical)

Research in nursing is examined and analyzed with the assistance of a faculty member.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify nursing research appropriate to selected topic.
2. Synthesize pertinent research findings.
3. Summarize both orally and in writing the research findings.

NURS 451 Research

Laboratory or clinical field research in nursing.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify a laboratory or clinical field research.
2. Synthesize literature related to the research.
3. Communicate both orally and in written form the results of the research.
4. Evaluate research findings in relation to published related research.

NURS 490 Selected Topics in Nursing

Current issues in nursing. May be repeated to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Identify current issue(s) in nursing.
2. Synthesize literature related to current issue(s).
3. Communicate both orally and in writing a summary of the findings.
4. Evaluate findings in relationship to current published literature.

Philosophy (PHIL)

PHIL 111 Multicultural Philosophy (Diversity)

Reality, knowledge, and value, from the perspectives of various African, Arabic, European, East Asian, South Asian and/or Native American cultures.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

PHIL 112 Philosophical Explorations

Basic issues in philosophy: theory of knowledge, human nature, morality, political systems, religious thought, the meaning of life, etc. Individual sections may focus on particular topics.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

PHIL 116 Elementary Topics in Philosophy

Study of a single philosopher or philosophical problem.
Coreq.: 1-3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

Student Learning Outcomes

1. Students will analyze philosophical concepts, arguments, issues, theories, and/or views.
2. Students will critically evaluate philosophical concepts, arguments, issues, theories, and/or views.
3. Students will apply abstract philosophical concepts appropriately.

PHIL 194 Critical Reasoning

Reasoning about human values, human knowledge and our place in the scheme of things. Conceptual analysis, identifying and analyzing arguments, and recognizing fallacious reasoning.
3 Cr. Fall | Spring | Summer GOAL AREA 2: CRITICAL REASONING

PHIL 211 Philosophy and Feminism (Diversity)

The ways in which philosophical and feminist thinking enhance one another. A variety of perspectives, including race, class, and culture.
3 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

PHIL 212 Moral Problems and Theories

Ethical theories and their application to moral problems such as abortion, euthanasia and animal rights.
3 Cr. Fall | Spring | Summer GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

PHIL 213 Environmental Ethics

Critically evaluate the ethical dimensions of environmental and natural resource issues. Identify moral values in alternative solutions and encourage reasoned defense of proposed actions.
3 Cr. Fall GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS | GOAL AREA 10: ENVIRONMENTAL ISSUES

PHIL 221 Philosophy of Religion

The existence of God, the problem of evil, the nature and justification of religious beliefs, religious diversity and the role of faith, revelation and science.
3 Cr. Even Fall | Even Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

PHIL 222 Existentialism

Kierkegaard, Nietzsche, Heidegger, and Sartre on the human subject. Existential phenomenology, knowledge, truth, freedom, personal relations, authenticity and value.
3 Cr. Odd Fall | Odd Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

PHIL 223 Elementary Symbolic Logic

Formal study of deductive reasoning: categorical, propositional, and predicate logic. Translation, truth tables, and derivations using standard rules of inference.
Prereq.: MATH 072 or high school advanced algebra with satisfactory math placement score. 3 Cr. Fall | Spring GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

Student Learning Outcomes

1. Students will illustrate historical and contemporary applications of mathematical/logical systems (MnTC 4.1).
2. Students will explain what constitutes a valid mathematical/logical argument (proof) (MnTC 4.3).
3. Students will apply higher-order problem-solving and/or modeling strategies (MnTC 4.4).
4. Students will translate ordinary language into symbolic notation.
5. Students will use truth tables.
6. Students will determine whether propositions are tautologies, contradictions, or neither.
7. Students will use propositional calculus.
8. Students will use predicate calculus.
9. Students will use rules of inference to derive propositions from other propositions.

PHIL 251 Ancient and Medieval Philosophy

Ancient and Medieval Philosophy. The Presocratics, Plato, Aristotle, Hellenistic and Roman philosophers, Augustine and Aquinas.
3 Cr. Fall GOAL AREA 6: HUMANITIES AND FINE ARTS

PHIL 252 Modern Philosophy

Western Philosophy from the Renaissance, through Descartes and the Rationalists, Hume and the Empiricists, and Kant.
3 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

PHIL 301 Ethics

The nature of morality. Theories of right action and the good person. The good life, facts and values, relativism, metaethics and relations between morality, religion and social attitudes.
Prereq.: PHIL 211 - PHIL 252, select one 3 Cr. Fall

Student Learning Outcomes

1. Articulate standard theories of the nature of morality (such as utilitarianism and deontology) and other topics in ethics (such as the good person, the good life, and relations between morality, relation and social attitudes).
2. Analyze these theories.
3. Critically evaluate these theories.

PHIL 302 Metaphysics

The nature of reality. God, the self, matter, mind, substance, modality, universals, free will, time, change, survival, death, and realism vs. anti-realism.
Prereq.: PHIL 211 - PHIL 252, select one. 3 Cr. Spring

Student Learning Outcomes

1. Analyze key concepts in metaphysics (e.g. free will, substance, personhood, modality, change, time, etc).
2. Analyze and evaluate major theories and

arguments in metaphysics.
3. Articulate and apply philosophical methodologies employed in metaphysics (e.g. conceptual analysis and the identification of ontological commitments).

PHIL 303 Epistemology

The nature, value, and possibility of knowledge and justified belief. Sense perception, the a priori, scepticism, epistemic virtue, foundationalism, coherentism, internalism, externalism and naturalism.
Prereq.: PHIL 211 - PHIL 252, select one. 3 Cr. Fall

Student Learning Outcomes

1. Articulate epistemological theories of knowledge such as the standard analysis of knowledge as justified, true belief.
2. Articulate theories of justification such as cohernetism, foundationalism and infinitism.
3. Analyze and evaluate theoretical arguments concerning epistemological issues such as the nature of knowledge, skepticism, the nature of justification, the existence of different types of knowledge, and naturalism.

PHIL 304 Symbolic Logic

Basic logical concepts: validity, necessity, possibility and consistency. Natural deduction for sentence and predicate logics. Introduction to modal and many-valued logics.
Prereq.: One of PHIL 211-252 3 Cr. Spring

Student Learning Outcomes

1. Test truth-functional and first-order argument-forms (and proposed inference rules) for validity.
2. Construct proofs in (and supplemental rules for) systems of sentence and first-order predicate logic.
3. Do similar work in at least one other area of logic, e.g., proofs in modal logic, or validity tests in three-valued logic.
4. Explain one or more of the central problems in the philosophy of logic, e.g., the nature of entailment, whether bivalence is fatalistic, the meaning of conditionals, etc.

PHIL 321 History of Western Philosophy III

German Idealism, Schopenhauer, Marxism, Nietzsche, Post-Humean British Empiricism, British Idealism, Pragmatism, Analytic Philosophy.
Prereq.: One of PHIL 211-252 3 Cr. Even Fall

Student Learning Outcomes

1. Identify major philosophers and philosophical themes of the 19th and 20th centuries.
2. Articulate and explain theories and arguments proposed by major philosophers of the 19th and 20th centuries.
3. Critically analyze and evaluate theories and arguments proposed by major philosophers of the 19th and 20th centuries.

PHIL 322 Social/Political Philosophy

Issues and theoretical frameworks. May include libertarian, feminist, communitarian and liberal social theories, and the work of Aristotle, Hobbes, Locke, Marx and Arendt.
Prereq.: One of PHIL 211-252 3 Cr. Odd Spring

Student Learning Outcomes

1. Explain major theories, concepts, and issues in social and political philosophy; e.g. justice, liberty, property ownership, the authority of the state.
2. Analyze major theories and concepts in social and political philosophy.
3. Evaluate major theories and concepts in social and political philosophy.

PHIL 323 Aesthetics

The nature and value of art, beauty, creativity, aesthetic experience and critical judgment.
Prereq.: One of PHIL 211-252 3 Cr. DEMAND

Student Learning Outcomes

1. Identify and evaluate standard analyses of key concepts in aesthetics, such as the concept of 'art' and 'beauty'.
2. Analyze the relationship between an artist's intentions and the meaning of the work created by that artist.
3. Identify and analyze factors that contribute to, or detract from, the value of a work of art.
4. Identify one broad movement (e.g. impressionism) in one of the arts (e.g. painting); analyze the theories and ideals motivating the movement; and explain in detail how selected art works from that movement exemplify those theories and ideals.

PHIL 324 Philosophy of Mind

The nature of conscious intelligence. The relation between the mind and body, artificial intelligence, knowledge of other minds.
Prereq.: One of PHIL 211-252 3 Cr. Odd Spring

Student Learning Outcomes

1. Articulate the major philosophical theories of mind (e.g., dualism, behaviorism, identity theory, functionalism, etc) or issues in the philosophy of mind (e.g., mental content, consciousness, mental causation, rationality, etc).
2. Analyze these theories or positions on these issues.
3. Evaluate these theories or positions: a) articulate major objections to these theories or positions; b) analyze these objections; c) evaluate these objections.

PHIL 325 Philosophy of Science

The nature of science. Carnap, Popper, Kuhn and others on scientific explanation, induction, scientific realism, objectivity and relativism.
Prereq.: One of PHIL 211-252 3 Cr. Odd Fall

Student Learning Outcomes

1. Articulate and evaluate philosophical theories of the nature of science.
2. Articulate theories scientific methodology such as inductivism, Bayesianism, critical rationalism and relativism.
3. Articulate important concepts in scientific methodology such as explanation and confirmation.
4. Analyze theoretical arguments concerning issues in the philosophy of science such as the problem of demarcation, the nature of scientific method and the nature of confirmation.
5. Identify the implications of philosophy of science for the practice of the sciences.

PHIL 326 Philosophy of Language

Meaning, reference, translation and indeterminacy, the analytic/synthetic distinction, speech act theory and theories of truth.
Prereq.: One of PHIL 211-252 3 Cr. Even Spring

Student Learning Outcomes

1. Explain major issues in the philosophy of language, e.g., the nature of representation, metaphor, theories of truth, theories of meaning, etc.
2. Analyze major positions on these issues.
3. Evaluate these positions and objections to them.

PHIL 327 Global Justice

Theories of global justice and applied issues in global justice, such as individual and collective responsibility for global poverty and poor working conditions; environmental justice and climate change; refugee migration, migrant labor, immigration and citizenship; war and terrorism.
Prereq.: None Coreq.: None 3 Cr. Even Spring GOAL AREA 8: GLOBAL PERSPECTIVES | GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

PHIL 328 Bioethics (Diversity)

Theories, principles, and methods. Ethical issues in health care, such as patient autonomy, informed consent, genetic engineering, biomedical research on human and nonhuman subjects, and justice. Development of written arguments on bioethical issues.
3 Cr. Fall GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

PHIL 411 Topics in Philosophy

Study of a single philosopher, problem or special topic. May be repeated with different topics. Graduate students will complete additional assignments.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze and evaluate the views of the philosopher focused on or the philosophical problem or topic featured in the course.
2. Research the ongoing philosophical debates relevant to the topic of the course.
3. Communicate their understanding of philosophical concepts and arguments in intelligent forms.
4. Formulate and express their own views in the context of an informed critique of ongoing philosophical discussions.

PHIL 441 Philosophy After Graduation

Produce a high quality philosophy paper, investigate graduate programs, prepare to integrate philosophy into one's life after graduation.
Prereq.: Three courses between PHIL 301-304. 3 Cr. Fall

Student Learning Outcomes

1. Students will identify a philosophical problem of special interest to them; collect, summarize and critically evaluate differing views on that problem; write a high quality paper on that topic that meets the standards of the Upper Division Writing Requirement for philosophy majors.
2. Students will research philosophy graduate programs of special interest to them and produce draft application materials.

3. Students will research non-academic careers available to philosophy majors and produce draft application materials.
4. Students will articulate and defend an informed view of the nature and value of philosophy, in and out of the academy.

PHIL 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

PHIL 451 Seminar
Advanced study of a single philosopher, problem or special topic in a seminar setting. May be repeated with different topics. Graduate students will complete additional assignments.
Prereq.: Two courses between PHIL 301-304 3 Cr. Spring

PHIL 481 Professional Ethics
The concept of a profession and the relationships that constitute professional activity. Confidentiality, privacy, consent, whistle blowing, professional codes of ethics and social responsibility.
3 Cr. Even Spring

Student Learning Outcomes
1. Critically analyze conceptions of the professions and of professional power and responsibility.
2. Compare and contrast various normative models of the professional-client relationship.
3. Evaluate the strengths and limitations of professional codes of ethics and their role in individual and collective professional accountability.
4. Identify and apply relevant ethical principles, values and professional standards to central issues in professional practice such as privacy, confidentiality, truth-telling and deception, whistle-blowing, and conflicts of interest.
5. Analyze moral dilemmas common to a wide range of professions.

PHIL 482 Philosophy of Law and Punishment
The nature, purpose and foundations of law. Legal and moral responsibility, just punishment, the limits of authority, and legal reasoning.
3 Cr. Odd Spring

Student Learning Outcomes
1. Analyze foundational questions in traditional legal theory and contemporary critical theories such as those concerning the nature of law, its authority and limits, and its relation to morality.
2. Identify and explain key philosophical issues of constitutional law.
3. Analyze concepts such as harm, cause, fault and responsibility and critically consider their use in private law.
4. Analyze and evaluate particular problems raised by criminal procedure such as epistemological questions concerning expertise and reliance on testimony or ethical issues regarding methods of obtaining and using evidence.
5. Survey and weigh the merits of traditional theories of criminal punishment, such as retributive and utilitarian approaches, as well as contemporary alternatives.

PHIL 483 Business Ethics
Personal, organizational and social issues in business. Product safety, whistle blowing, employee and corporate rights and regulation. Personal dilemmas and conflicts in policy making.
3 Cr. Spring

PHIL 484 Global Business Ethics
Personal, organizational, and nationalistic issues in international business. Relativism, corporate responsibility for the environment, bribery and the use of Third World labor.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES | GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

Physical Education & Sport Science (PESS)

PESS 106 Community First Aid and Safety
Training indivudials to overcome any reluctance to act in emergency situations and to recognize and care for life-threatening emergencies, such as respiratory or cardiac problems, sudden illness, or injuries to infants, children, or adults.
1 Cr. DEMAND

PESS 115 Contemporary Activities
Fundamental skills and knowledge of contemporary physical activities. Activities will change as popularity dictates. May be repeated with different activities

for a maximum of 4 credits.
1 Cr. DEMAND

Student Learning Outcomes
1. Define physical fitness and its five major components.
2. Identify the key elements of physical activity that contribute to overall health and wellness.
3. Appraise common activities for their potential contributions to a healthy lifestyle.
4. Synthesize the social and economic impact of being physically active throughout one's lifetime.

PESS 120 Aerobic Fitness

Designed to enhance cardiovascular health by studying appropriate physiological principles. Students also will participate in one or more forms of aerobic exercises; e.g. walking, running, swimming, cycling, skiing, dancing, etc.
1 Cr. DEMAND

Student Learning Outcomes
1. Define the five components of physical fitness.
2. Summarize the overload principle and how aerobic and muscular endurance are maintained throughout one's lifetime.
3. Evaluate major lifestyle behaviors associated with heart disease and how to reduce one's risk.
4. Identify common measures of aerobic fitness and perform several field based tests.
5. Evaluate and measure body composition and explain the importance of a desirable ratio of lean to fat body tissue.
6. Participate to improve physical fitness.

PESS 122 Lifelong Health and Fitness

Study of appropriate physiological and psychological aspects to gain knowledge, experiences, and skills needed to develop and maintain a healthy and fit lifestyle.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Define Wellness and Fitness and describe parameters that comprise good physical health.
2. Explain why CV endurance is the most important component of fitness and how the main energy systems contribute to various forms of physical exertion.
3. Determine body composition and explain the importance of a desirable ratio of lean to fat body tissue.
4. Describe the benefits of having reasonable flexibility and how it relates to low back pain.
5. Explain the overload principle and how one maintains appropriate muscle strength and /or endurance throughout one's lifetime.
6. Identify the major lifestyle behaviors that are associated with heart disease and describe how to reduce one's risk.
7. Identify the risk factors and warning signs for various forms of cancer, diabetes, and osteoporosis.
8. Describe the role of heredity, exercise and diet in weight control.
9. Describe how the body responds to stress, identify potential stressors and establish strategies to reduce stress.
10. Describe healthy choices to ensure lifetime fitness.

PESS 123 Weight Training

Designed to offered systematic strength training programs and conditioning techniques. Optional grading for non physical education majors.
1 Cr. Fall | Spring

Student Learning Outcomes
1. Identify major muscles of the body, the joints they cross, and their primary movements.
2. Create a workout plan that addresses muscular strength, endurance, and flexibility.
3. Demonstrate proper lifting techniques and perform appropriate testing protocols to assess overall muscular strength.
4. Design a 30-minute circuit training program aimed to develop and/or maintain overall fitness.

PESS 125 Social Dance (Diversity)

Basic skills and knowledge of social dance from a cultural and historical perspective.
3 Cr. DEMAND

PESS 126 Aerobic Dance

Basic aerobic fundamentals, participation in exercise and aerobic dance to music. Individual aerobic fitness tests.
1 Cr. DEMAND

PESS 130 Skating

Skills involved in beginning figure skating, as well as recreational and power skating techniques. Student must furnish figure skates. Optional grading.
1 Cr. DEMAND

PESS 131 Developmental Activities for PreK-6

Physiological, kinesiological and psychological concepts, principles and ideas pertaining to movement participation of PreK-6 school children.
1 Cr. Fall | Spring

PESS 135 Swimming for Individuals with Special Needs
Designed especially for individuals who for psychological and/or physical reasons cannot participate in an inclusive swimming class.
1 Cr. DEMAND

PESS 137 Swimming
Instruction in swimming, including basic strokes and related skills, personal safety skills, and endurance swimming.
1 Cr. DEMAND

PESS 140 Self-Defense for Women
Fundamental skills and techniques of fall, rolling, throwing and breaking holds. Specific emergency techniques of self-denfense and specific safety skills.
1 Cr. DEMAND

PESS 144 Volleyball
Volleyball skills and techniques.
1 Cr. DEMAND

PESS 152 Physical Fitness
Physical fitness tests, calisthenics, running, fitness, activities, leadership techniques.
1 Cr. DEMAND

PESS 153 Ultra Fitness
Conditioning techniques and intense activities designed to increase and maintain fitness levels of the physically fit and well conditioned student. Permission of instructor. May be repeated for a maximum of 3 credits.
1 Cr. DEMAND

PESS 160 Slow Pitch Softball
Techniques, skills and strategy.
1 Cr. DEMAND

PESS 200 Beginning Skiing
Basic skiing techniques and knowledge. Tow fee charged. Bus and equipment use for a fee are optional.
1 Cr. DEMAND

PESS 201 Intermediate Skiing
Techniques geared to those with some skiing experience. Students should have mastered beginning skills including snowplow turns, wedge turns, right and left, braking and stopping. Tow fee charged. Bus and equipment use for a fee are optional.
1 Cr. DEMAND

PESS 202 Cross Country Skiing
Beginning and intermediate work in ski touring. Physical conditioning and optimum attire and equipment are addressed. Cross country techniques on level terrain and uphill/downhill skills are covered. Students furnish own equipment.
1 Cr. DEMAND

PESS 203 Snowshoeing
Basic techniques and knowledge. For beginners only. Snowshoes furnished.
1 Cr. DEMAND

PESS 204 Advanced Skiing
Advanced skiing techniques applied to a broad range of terrain and snow conditions.
Prereq.: PESS 201 1 Cr. DEMAND

PESS 206 Responding to Emergencies
Skills and knowledge necessary to give aid to victims of trauma or sudden illness. Red Cross first aid and adult, child, and infant CPR certifications available.
2 Cr. Fall | Spring

PESS 210 Karate
Terminology, fundamentals, basic techniques of blocking, punching, kicking, and the strategies of basic attack and defense. Kata is introduced. Special fee for equipment.
1 Cr. DEMAND

PESS 213 Bicycling
Intermediate-level bicycling. Includes self-conditioning, bicycling skills, safety considerations and tours. Student furnishes own bicycle.
1 Cr. DEMAND

PESS 221 Coaching Wrestling
Theory and practice of coaching wrestling.
2 Cr. Fall | DEMAND

Student Learning Outcomes

1. Demonstrate and analyze the basic skills of wrestling.
2. Demonstrate and analyze the basic tactics and

strategies of wrestling.
3. Identify and describe the rules, regulations, scoring, and officiating of wrestling.
4. Design a practice plan, program plan, and competition management plan for wrestling.

PESS 222 Bowling
Techniques and knowledge of bowling. Fee for equipment and lane.
1 Cr. DEMAND

PESS 228 Racquetball
Terminology, fundamentals skills of serving, forehand, backhand, and wall play. Singles and doubles games. Student must furnish own racquet, eye guard and balls.
1 Cr. DEMAND

PESS 230 Tennis
Stroke development, rules, terminology, singles and doubles strategy. Student must furnish own racquet and balls.
1 Cr. DEMAND

PESS 232 Badminton
Basic techniques and knowledge in badminton, including rules, strategies, and etiquette for single and doubles games.
1 Cr. DEMAND

Student Learning Outcomes
1. Identify the rules and terminology associated with badminton singles and doubles.
2. Describe the strategies necessary to play singles and doubles.
3. Demonstrate skills required in hitting various shots.

PESS 238 Archery
History, basic techniques for target shooting. Terms, rules and etiquette.
1 Cr. DEMAND

PESS 249 Anatomy/Kinesiology
An introduction to gross anatomy and the study of human motion based on anatomical and mechanics principles. All major organs systems are addressed with emphasis placed on musculoskeletal application to exercise and sport.
4 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Use the design and function of the skeletal and muscular systems and torque principles to identify active muscles during various physical activities.
2. Determine connections between the anatomical structures of the major organ systems and their role in maintaining normal bodily functions and health.
3. Identify the responses of most of the organ systems to exercise, aging, and disease.

PESS 250 Coaching Soccer
Theory and practice of coaching soccer.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of soccer.
2. Demonstrate and analyze the basic tactics and strategies of soccer.
3. Identify and describe the rules, regulations, scoring, and officiating of soccer.
4. Design a practice plan, program plan, and competition management plan for soccer.

PESS 251 Coaching Basketball
Theory and practice of coaching basketball.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of basketball.
2. Demonstrate and analyze the basic tactics and strategies of basketball.
3. Identify and describe the rules, regulations, scoring, and officiating of basketball.
4. Design a practice plan, program plan, and competition management plan for basketball.

PESS 252 Coaching Gymnastics
Theory and practice of coaching gymnastics and tumbling.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of gymnastics and tumbling.
2. Demonstrate and analyze the basic tactics and strategies of gymnastics and tumbling.
3. Identify and describe the rules, regulations, scoring, and officiating of gymnastics and tumbling.
4. Design a practice plan, program plan, and competition management plan for gymnastics and tumbling.

PESS 253 Coaching Swimming and Diving
Theory and practice of coaching swimming.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of swimming and diving.
2. Demonstrate and analyze the basic tactics and strategies of swimming and diving.
3. Identify and describe the rules, regulations, scoring, and officiating of swimming and diving.
4. Design a practice plan, program plan, and competition management plan for swimming and diving.

PESS 254 Coaching Hockey
Theory and practice of coaching hockey.
2 Cr.

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of hockey.
2. Demonstrate and analyze the basic tactics and strategies of hockey.
3. Identify and describe the rules, regulations, scoring, and officiating of hockey.
4. Design a practice plan, program plan, and competition management plan for hockey.

PESS 255 Coaching Football
Theory and practice of coaching football.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of football.
2. Demonstrate and analyze the basic tactics and strategies of football.
3. Identify and describe the rules, regulations, scoring, and officiating of football.
4. Design a practice plan, program plan, and competition management plan for football.

PESS 256 Coaching Baseball
Theory and practice of coaching baseball.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of baseball.
2. Demonstrate and analyze the basic tactics and strategies of baseball.
3. Identify and describe the rules, regulations, scoring, and officiating of baseball.
4. Design a practice plan, program plan, and competition management plan for baseball.

PESS 257 Coaching Track
Theory and practice of coaching track and field events.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of track and field.
2. Demonstrate and analyze the basic tactics and strategies of track and field.
3. Identify and describe the rules, regulations, scoring, and officiating of track and field.
4. Design a practice plan, program plan, and competition management plan for track and field.

PESS 258 Coaching Volleyball
Theory and practice of coaching volleyball.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of the volleyball.
2. Demonstrate and analyze the basic tactics and strategies of volleyball.
3. Identify and describe the rules, regulations, scoring, and officiating of volleyball.
4. Design a practice plan, program plan, and competition management plan for volleyball.

PESS 259 Coaching Tennis
Theory and practice of coaching tennis.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of tennis.
2. Demonstrate and analyze the basic tactics and strategies of tennis.
3. Identify and describe the rules, regulations, scoring, and officiating of tennis.
4. Design a practice plan, program plan, and competition management plan for tennis.

PESS 260 Coaching Softball
Theory and practice of coaching softball.
2 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and analyze the basic skills of softball.

2. Demonstrate and analyze the basic tactics and strategies of softball.
3. Identify and describe the rules, regulations, scoring, and officiating of softball.
4. Design a practice plan, program plan, and competition management plan for softball.

PESS 270 Foil Fencing

Basic techniques and knowledge in the use of the foil, including rules and strategies for bouting, and judging techniques.
1 Cr. DEMAND

PESS 271 Skin and Scuba Diving

Techniques, knowledge and practices of skin and scuba diving (Self-Contained Underwater Breathing Apparatus). Emphasis on safety factors.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify the requirements for certification in SCUBA diving.
2. Implement appropriate safety techniques of SCUBA diving, including the buddy system.
3. Demonstrate proficiency in buddy system techniques, including underwater sign language and buddy breathing.
4. Demonstrate proper procedures in donning SCUBA equipment and checking buddy's gear.
5. Demonstrate proficiency in basic SCUBA diving skills.
6. List the primary effects of pressure and associated diving maladies.
7. Describe the primary effects of pressure on ascents and decents.
8. List factors to be considered when planning a dive in open water.

PESS 275 Golf

Stroke development, rules, terminology, and strategies. Green fee required.
1 Cr. DEMAND

PESS 290 Basketball

The basic skills and knowledge used in playing basketball. Optional grading.
1 Cr. DEMAND

PESS 300 Motor Behavior

Study of how humans learn motor skills during the developmental stages with emphasis on normal, delayed, and abnormal motor patterns.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Gain knowledge of the basic vocabulary and concepts in motor development and motor learning as children grow from infants up through public school years.
2. Gain knowledge in motor skill acquisition, how and when there are optimal windows for development.
3. Assess functional capacity as it relates to skill acquisition.
4. Develop strategies for teaching motor skills to infants and children ages 1-18 with and without disabilities.

PESS 303 Orientation to Athletic Training

Orientation to the profession of athletic training. Requires a minimum of 8 to 10 hours per week observation in the athletic training rooms.
Prereq.: PESS 304 1 Cr. Fall

Student Learning Outcomes

1. Understand the time commitment required in the completion of this major.
2. Understand the need for and development of emergency action plans for different athletic venues.
3. Understand preventative measures athletic trainers perform for individuals that participate in sport and exercise.
4. Understand the duties and responsibilities associated with providing athletic training care for a sports team.
5. Understand the duties and responsibilities of providing rehabilitation for injured athletes.

PESS 304 Care and Prevention of Athletic Injuries

Introductory course to the field of athletic training, including scientific and clinical foundations of athletic training and sports medicine.
Prereq.: PESS 249 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Discuss the professional, ethical and legal parameters of members of the sports medicine team.
2. Describe the role of the certified athletic trainer in the organization and administering an athletic training program.
3. Identify various sports organization whose development assisted in the evolution of athletic training as a discipline.
4. Analyze the legal issues in the treatment of an athlete be members of the sports medicine team.
5. Analyze the key elements of a athletic training

program including the prevention, assessment, management and rehabilitation of an injured athlete.
6. Demonstrate the ability to select and administer appropriate pre-participation athletic screens for a specific group of athletes.
7. Discuss the role of nutrition in physical activity and the recognition of eating disorders.
8. Identify, select, fit, and apply protective devices commonly used by an athlete for the prevention of injury and the protection of an injured body part.
9. Design an emergency plan delineating responsibilities for each member of the sports medicine team, coaches and game officials in response to an athlete sustaining an injury.
10. Discuss the importance of universal precautions in the prevention of transmission of disease.

PESS 305 Officiating Football for Men

Techniques and rules involved in officiating high school football.
1 Cr. Fall

Student Learning Outcomes

1. Demonstrate the basic skills of officating the sport of football.
2. Analyze the basic tactics and strategies of officiating football.
3. Identify and describe the rules, regulations and scoring of the sport of football.

PESS 306 Officiating Basketball

Techniques and rules involved in officiating high school basketball.
1 Cr. Spring

PESS 307 Athletic Training Clinical Experience I

Application of the required athletic training competencies from PESS 304 in specific clinical settings. Requires a minimum of 15 hours to a maximum of 20 hours per week depending on sport assignments.
Prereq.: PESS 304 1 Cr. Fall | Spring

PESS 308 Athletic Training Clinical Experience II

Application of the required athletic training competencies from PESS 313 in specific clinical settings. Requires a minimum of 15 hours to a maximum of 20 hours per week depending on sport assignments.
Prereq.: PESS 307, PESS 313 1 Cr. Fall

PESS 309 Athletic Training Clinical Experience III

Application of the required athletic training competencies from PESS 314 in specific clinical settings. Requires a minimum of 15 hours to a maximum of 20 hours per week depending on sport assignments.
Prereq.: PESS 308, PESS 314 1 Cr. Spring

PESS 310 Athletic Training Clinical Experience IV

Application of the required athletic training competencies from PESS 315 in specific clinical settings. Requires a minimum of 15 hours to a maximum of 20 hours per week depending on sport assignments.
Prereq.: HLTH 406, PESS 309, PESS 315, PESS 448 1 Cr. Fall

PESS 311 Athletic Training Clinical Experience V

Application of the required athletic training competencies from PESS 316 in specific clinical settings. Requires a minimum of 15 hours to a maximum of 20 hours per week depending on sport assignments.
Prereq.: HLTH 412/512, PESS 310, PESS 316, PESS 449 1 Cr. Spring

Student Learning Outcomes

1. Discuss proper exercise techniques.
2. Discuss the use of joint mobilization techniques.
3. Discuss the use of joint and limb measurements.
4. Discuss using skin fold measurements for the determination of body fat percentage.
5. Discuss nutritional intake and weight control.
6. Discuss the development of a rehabilitation protocols for various athletic injuries.
7. Discuss the development of a cardiovascular program for injured athletes.
8. Discuss pharmacology in reference to the athletic population.
9. Discuss proper lifting and spotting techniques.
10. Assess general vital signs.

PESS 312 Inclusive Techniques for Diverse Populations in Health & Physical Education

Inclusive teaching techniques, adaptations and modifications for children from diverse populations in health and physical education settings. PreK-12.
Prereq.: PESS 300 3 Cr. Fall

Student Learning Outcomes

1. Describe the historical and philosophical foundations, legal bases, and contemporary issues pertaining to the education of students with identified disabilities as the issues apply to physical

and motor fitness.
2. Discuss the educational definitions, issues related to identification and eligibility criteria pertaining to students who have disabilities relating to physical and motor fitness.
3. Describe special physical education, adapted physical education, movement education, and motor development including skills in aquatics, dance, games, and individual, group, intramural, and lifetime sports.
4. Address the impact of single, multiple, and co-existing conditions of disabilities on motor functioning and motor skill acquisition.
5. Discuss the impact of typical and atypical motor development and function on the educational, social, and psychological well-being of students.
6. Explain the use, limitations, ethical concerns, administration, and interpretation of formal and informal assessments for students with identified disabilities that impact physical and motor fitness and how to communicate the results to the students, families, educators, and other professionals.
7. Adapt and modify existing assessment tools and methods to accommodate the abilities and needs of students with disabilities in physical and motor fitness.
8. Apply evaluation results to assist the IEP team in selection of service options for addressing individual needs in physical education.
9. Describe how to communicate with students, using a range of methods and strategies, including students who are nonverbal or have limited verbal expression.
10. Access services, networks, agencies, and organizations relevant to the field of developmental adapted physical education.

PESS 313 Athletic Injury Assessment-Lower Extremity

Scientific and clinical foundations of specific concepts relative to injury evaluation, management, and treatment of athletic injuries to the lower extremities.
3 Cr. Fall

Student Learning Outcomes
1. Use proper medical terminology in the description of athletic injuries and patient documentation.
2. Discuss a systematic assessment and evaluation of an on-field lower extremity injury and a lower extremity injury seen in a clinical setting.
3. Demonstrate the ability to document results of an on-field and clinical evaluations of the lower extremity injury.
4. Use proper nomenclature for soft tissue injuries, bony injuries, and neuropathologies.
5. Assess posture and discuss common postural deviations and their implication in the assessment and treatment of athletic injuries.
6. Discuss the clinical anatomy of the foot and toes.
7. Perform a systematic clinical and on-field evaluation of the foot and toes.
8. Analyze the finding of a clinical or on-field evaluation of the foot and toes and design a plan of care based upon the injury assessment.
9. Discuss the clinical anatomy of the ankle and lower leg.
10. Perform a systematic clinical and on-field evaluation of the ankle and lower leg.

PESS 314 Athletic Injury Assessment--Upper Extremity

Assessing the severity of athletic injuries and illnesses with emphasis placed on recognizing and evaluating signs and symptoms associated with illnesses and injuries to the upper extremities.
Prereq.: PESS 307, PESS 313 3 Cr. Fall

Student Learning Outcomes
1. Discuss a systematic assessment and evaluation of an on-field upper extremity injury and an upper extremity injury seen in a clinical setting.
2. Demonstrate the ability to document results of an on-field evaluations and clinical evaluations of the upper extremity, head, abdominal, thorax, and spinal injuries.
3. Use proper nomenclature for soft tissue injuries, bony injuries, and neuropathologies.
4. Discuss the clinical anatomy of the cervical spine.
5. Perform a systematic clinical and on-field evaluation of the cervical spine.
6. Analyze the findings of a clinical or on-field evaluation of the cervical spine and design a plan of care based upon the injury assessment.
7. Demonstrate an understanding of the clinical anatomy of the shoulder and upper arm.
8. Perform a systematic clinical and on-field evaluation of the shoulder and upper arm.
9. Analyze the findings of a clinical or on-field evaluation of the shoulder and upper arm, and design a plan of care based upon the injury assessment.
10. Discuss the clinical anatomy of the elbow and forearm.

PESS 315 Therapeutic Modalities in Athletic Training

Theory, biophysical principles and the range of potential sports medicine applications for the various physical agent modalities are covered.
Prereq.: HLTH 210, PESS 308, PESS 313, PESS 314, PESS 349 3 Cr. Spring

Student Learning Outcomes

1. Discuss tissue response to injuries.
2. Perform a pain assessment.
3. Discuss the various receptors within the body influenced by the use of therapeutic modalities.
4. Discuss current theories on the modulation of pain sensation.
5. Discuss the decision-making process and goal development in using therapeutic modalities in the treatment of athletic injuries.
6. Perform appropriate medical documentation of the use of therapeutic modalities considering continuity of care, legal considerations and third party reimbursement.
7. Discuss the use, contraindications, and application of therapeutic cold and superficial heating therapeutic modalities in the treatment of athletic injuries.
8. Discuss the use, contraindications, and application of ultrasound in the treatment of athletic injuries.
9. Discuss the use, contraindications, and application of shortwave diathermy in the treatment of athletic injuries.
10. Discuss the principles of electrical stimulation.

PESS 316 Rehabilitation Techniques in Athletic Training

A comprehensive guide to the design, implementation, and supervision of rehabilitation programs for sports-related injuries, with an emphasis on the practical application of theory in a clinical setting.
Prereq.: HLTH 406, PESS 309, PESS 314, PESS 315, PESS 448 3 Cr. Fall

Student Learning Outcomes

1. Discuss the basis of injury rehabilitation considering the healing process, the psychology of injury, and the evaluation and design of a rehabilitation program.
2. Discuss the importance of the design of a rehabilitation program for the return of an individual to activity considering: a. Neuromuscular control. b. Restoring range of motion and improving flexability. c. Regaining muscular strength, endurance, and power. d. Regaining postural stability and balance. e. Maintaining cardiorespiratory fitness.
3. Discuss the techniques used in rehabilitation, their application and limitations in the design of a rehabilitation program, and the ability to assess techniques including: a. Core stabilization. b. Plyometrics. c. Open and closed kinetic chain exercises. d. Isokinetics. e. Joint mobilization and traction techniques. f. PNF and other soft-tissue mobilizations. g. Aquatic therapy. h. Functional progression.
4. Discuss rehabilitation programs for a variety of injuries utilizing the different treatment techniques depending on the stage of recovery for: a. Shoulder injuries. b. Elbow injuries. c. Wrist, hand, and fingers. d. Groin, hip, and thigh. e. Knee injuries. f. Lower-leg injuries. g. Ankle and foot. h. Spine of an injured athlete.

PESS 317 Evidence Guided Practice in Athletic Training

Examination of medical literature related to the practice of Athletic Training and the development of the NATA position statements.
Prereq.: Admitted to the ATP 3 Cr. Spring

PESS 318 General Medical Conditions and Pharmacology for Athletic Trainers

Examination of common medical conditions related to Athletic Training practice and basic pharmacology.
Prereq.: Admitted to the ATP, PESS 317 3 Cr. Fall

PESS 321 Officiating Women's Volleyball

Techniques, rules, problems and procedures. NAGWS rating prossible.
1 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate the basic skills of officating the sport of volleyball.
2. Analyze the basic tactics and strategies of officiating volleyball.
3. Identify and describe the rules, regulations and scoring of the sport of volleyball.

PESS 324 Judging Women's Gymnastics

Preparation for judging women's gymnastics at high school level. National Federation and Minnesota State High School League rules applied.
1 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate the basic skills of judging the sport of gymnastics.
2. Analyze the basic tactics and strategies of judging gymnastics.
3. Identify and describe the rules, regulations and scoring of the sport of gymnastics.

PESS 326 Officiating Wrestling

Techniques and rules involved in officiating men's high school wrestling.
1 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate the basic skills of officiating the sport of wrestling.
2. Analyze the basic tactics and strategies of officiating wrestling.
3. Identify and describe the rules, regulations and scoring of the sport of wrestling.

PESS 333 Teaching Dance

Methods and materials of teaching appropriate dance forms K-12. Instructor permission.
3 Cr. Fall | Spring

PESS 349 Human Physiology

Study of the basic systems of the human body and the mechanisms influencing them.
Prereq.: PESS 248 or PESS 249 3 Cr. Fall | Spring

Student Learning Outcomes

1. Classify the physiological components of human movement via the energy systems.
2. Explain the maintenance of the body including the cardiovascular, respiratory, metabolic, digestive, muscular, neurological, thermoregulatory, reproductive and acid/base systems.
3. Explain practical application of lecture and discussion materials while using laboratory instruments.
4. Organize, measure and analyze various laboratory tests when completed as solo data collector as well as in small groups.

PESS 355 Competitive Sports for Women

Critical analysis of interscholastic and intercollegiate programs for girls and women.
2 Cr. DEMAND

Student Learning Outcomes

1. Describe issues surrounding gender in sport from theoretical, physiological, biological, historical, psychological, and sociological perspectives.
2. Examine how sport is culturally 'gendered' by comparing norms, values, and practices of other social institutions such as the family, school and youth groups, politics and law, the economy, and the mass media.
3. Identify the relationship between gender and participation in physical activity and sport, with attention to the historical participation of girls and women and ethnic/sexual minorities in sport.
4. Assess the organizational governance, structure and philosophy, and social influences on the development of sport and physical activity.
5. Analyze how sport and physical activity reinforces social inequalities or promotes social mobility.
6. Identify and evaluate the impact of the feminist and civil rights movements on sport and physical activity.
7. Differentiate current stereotypes/attitudes in sport and physical activity.
8. Demonstrate information literacy by finding, assessing and using research related to gender and sport.

PESS 358 Team Sport Skills and Teaching Techniques

Team sport skills and teaching techniques for physical education teaching majors. Before student teaching.
3 Cr. Fall | Spring

PESS 366 Lifeguard Training

Theory and practice in techniques of preventing water related accidents and management of aquatic facilities as identified in the American Red Cross. Lifeguard Training Course.
2 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate the basic skills of lifeguard training.
2. Analyze the basic tactics and strategies of performing water rescues.
3. Identify and describe the rules, regulations and policies of swimming facilities.

PESS 368 Water Safety Instruction

Instruction, methods and teaching techniques in swimming and related aquatic skills for certification in Red Cross Water Safety instruction.
3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate and recognize strong technically correct swimming strokes.
2. Analyze aquatic skills and swimming techniques.
3. Identify and describe effective teaching methods to be used in all types of water environments.

PESS 369 Adapted Aquatics
Techniques and methods of teaching swimming designed for individuals with disabilities. Practical experience included.
2 Cr. Summer

Student Learning Outcomes
1. Describe the historical perspective of adapted aquatic programming.
2. Differentiate adapted aquatics programs of various professional organizations (e.g., YMCA, Red Cross, AAPAR).
3. Discuss how legislation (Rehabilitation Act, IDEA, ADA) has impacted adapted aquatic programs.
4. Describe benefits of participation in an adapted aquatics program.
5. Differentiate the various adapted aquatics models (medical-therapeutic, educational, recreational, transdisciplinary) in reference to: specific components, goals & objectives, settings, providers, issues.
6. Complete aquatic assessments on children with disabilities, develop goals and objectives based on assessment results, and plan & implement developmentally appropriate activities for learners' specific needs.
7. Identify sensory integration components and design appropriate aquatic programming for deficit areas.
8. Describe the organization and development of an adapted aquatics program.
9. Support the selection, acquisition, and use of assistive technology for the development of physical and motor fitness, including physical education hardware and software, adapted and adaptive equipment, and supports for participation and communication.
10. Apply the standards of effective practice in teaching students who have needs in the areas of physical fitness and gross motor skills in prekindergarten and primary, middle level, and secondary settings across a range of service delivery models.

PESS 370 Principles of Coaching
Fundamentals of athletic coaching.
3 Cr. DEMAND

Student Learning Outcomes
1. Distinguish the philosophical principles of coaching.
2. Examine the behavioral/psychological principles of coaching.
3. Analyze the pedagogical principles of coaching.
4. Appraise the physiological principles of coaching.
5. Examine the managerial principles of coaching.

PESS 388 Physical Activity for Early Childhood
Design, delivery, and theories of physical activity and related concepts for teaching children from 3 to 8 years of age.
2 Cr. DEMAND

Student Learning Outcomes
1. Select and deliver developmentally appropriate physical activities for children 3 to 8 years.
2. Design and modify physical activities to be 'inclusive' for all children.
3. Integrate physical education with other academic areas.
4. Describe, implement and analyze, various teaching approaches used in physical education.
5. Identify characteristics of developmentally appropriate physical activity programs.

PESS 398 Health and Physical Education for Elementary Teachers
Concepts, materials, programming, and procedures related to teaching health and physical education to elementary children.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Integrate physical education/health activities with academic subject areas.
2. Define specific terminology related to movement education, physical education, sport activities, fitness and health.
3. Identify characteristics of a developmentally appropriate physical education program.
4. Critically analyze the health related components of fitness and apply these factors to lifelong health and physical fitness programs.
5. Understand the value of physical education as a part of the total curriculum.

PESS 405 Senior Seminar in Athletic Training

Trends in the field of athletic training/sports medicine, emphasizing prevention of adverse health conditions, sports trauma, management skills, and administration of athletic training programs.
Prereq.: HLTH 406, PESS 310, PESS 315, PESS 316, PESS 449 Coreq.: 3-4 Cr. Spring

Student Learning Outcomes
1. Discuss the professional, ethical and legal parameters of the athletic trainer.
2. Discuss the role of a certified athletic trainer in administering an athletic training program including documentation.
3. Discuss the profession, ethical and legal parameters which define the proper role of the certified athletic trainer in treatment of injured athletes.
4. Discuss the relevance of legal issues in athletic training with special attention to the concepts of negligence, liability, state, federal laws and national organization guidelines.
5. Discuss of the roles of the members of the sports medicine team appropriate to a particular athletic situation.
6. Discuss the key elements of an athletic training program including the prevention, assessment, rehabilitation of an injured athlete.
7. Discuss the identification and treatment of general medical conditions and disabilities within the athletic trainer's scope of practice.
8. Discuss the use of diagnostic tests when recommended by a physician (i.e. CAT Scan, Bone Scan, MRI, X-Ray).
9. Discuss the prevailing pain control theories and assorted rationale for the selection and use of techniques for the control of acute and chronic pain.
10. Discuss the legal requirements for the storage, transportation, and documentation of Rx and non Rx medications.

PESS 406 Organization and Administration of Athletic Training

Examination of management and organizational principles for the operation of an Athletic Training Department in various settings.
Prereq.: Admitted to the ATP, PESS 315 3 Cr. Fall

Student Learning Outcomes
1. Explain personnel management including the following: federal laws governing the recruitment and selection of employees, retention of employees (physicians and allied health personnel), development of policies and procedures manual, employment performance evaluation, and compliance with nondiscriminatory employment practices. This includes the development of a resume and cover letter and interview techniques.
2. Explain the basic legal concepts that apply to a medical or allied health care practitioner's responsibilities regarding standard of care, scope of practice, liability, negligence, informed consent, OSHA standards, and federal privacy statutes governing medical records. The student will explain the ability to access and manage patient medical records via the use of written and computer information management systems, and/or injury/illness surveillance and reporting systems.
3. Analyze written plans for the delivery of health care services within the athletic training clinical setting. This will include explanations involving pre-participation physicals/wellness screening, drug testing/screening procedures, emergency care plans, location of emergency care supplies and equipment, procedures for accessing first aid/emergency care via community-based emergency care facilities and managed care systems, and event coverage.
4. Explain insurance issues including the use of diagnostic and procedural coding, third party reimbursement, and federal laws governing confidentiality in the maintenance of medical health records.
5. Develop operational and capital budgeting regarding the ordering of durable and non-durable medical supplies following the completion of a supply inventory and/or needs assessment.
6. Explain the legal implications for the maintenance of health care facilities, modality and exercise equipment upkeep, and develop a written risk management plan to address these issues.
7. Explain federal, state, and local regulations regarding the proper storage, transportation, dispensing (administration where possible), and documentation of commonly used medications within the clinical setting.
8. Create an architectural design that relate to the planning of efficient clinical practice settings and environments.
9. Explain management styles and strategies used in a variety of clinical practice settings. This includes understanding the concepts of vision and mission statements and the use of Strengths Weaknesses Opportunities and Threats (SWOT's) in the development of strategic planning.

PESS 408 Philosophy of Sport

Objectives/values of sport in a contemporary society.
2 Cr. Fall | Summer

Student Learning Outcomes
1. Evaluate processes involved in ethical decision-making.
2. Analyze Ethical, social, and legal problems related to sport in its dimensions as play, competition, leisure, education, and work.
3. Apply Philosophical schools of thought to ethical decision-making.
4. Identify Authority/power and rights/responsibilities as they relate to legal, social, and ethical dilemmas in sport.
5. Evaluate the sociological foundations of the study of ethics in sport.
6. Analyze and apply selected ethical theories.

PESS 423 Basic Electrocardiography
Study and measurement of the electrical activity associated with cardiac function.
Prereq.: PESS 349 3 Cr. Spring

Student Learning Outcomes
1. Synthesize basic vocabulary and concepts dealing with electrocardiography (EKG).
2. Summarize electrophysiology as it relates specifically to the heart as a person goes from rest to the stress of maximal exercise.
3. Assess one's own functional capacity as it relates to the aerobic fitness and EKG.
4. Apply fundamental principles for interpretation of resting and exercise EKG's.
5. Describe functional changes, both acute and chronic, of physical activity and individual behavior to maintain good health.
6. Explain the basic principles of EKG testing by applying them in a real-life setting.

PESS 425 Workshop in Track and Field
Uses a learn-by-doing approach to track and field activities. Special emphasis will be placed on biomechanical analysis of events as well as coaching and officials certification.
1 Cr. DEMAND

PESS 430 Seminar: Topical
Selected topics in physical education and sport science. May be repeated to maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

PESS 431 Coaching Practicum
Supervised, practical experience in coaching settings. Must be enrolled in PESS 431 prior to beginning the practicum experience.
Prereq.: Be of junior standing or higher and have successfully completed 9-10 credits in the coaching minor before enrolling in PESS 431. 1 Cr. Fall | Spring | Summer

PESS 432 Practicum I in Sports Management
Supervised experience in a recreational setting particular to the student's needs.
Prereq.: PESS 206, REC 415, REC 416 2 Cr. Fall | Spring | Summer

PESS 433 Practicum II in Sports Management
Supervised experience in an athletic setting particular to the student's needs.
Prereq.: PESS 206, PESS 432, REC 415, REC 416 2 Cr. Fall | Spring | Summer

PESS 439 Social Skills and Initiative Activities
Adventure games, initiative problems, and trust activities which foster cooperative social skills and attitudes in children and youth.
1 Cr. DEMAND

PESS 444 Internship in Athletic Training
Practical on-site clinical work experience for students in Athletic Training.
Coreq.: 4-12 Cr. DEMAND

Student Learning Outcomes
1. Discuss proper exercise techniques.
2. Discuss the use of joint mobilization techniques.
3. Discuss the use of joint and limb measurements.
4. Discuss using skin fold measurements for the determination of body fat percentage.
5. Discuss nutritional intake and weight control.
6. Discuss the development of a rehabilitation protocols for various athletic injuries.
7. Discuss the development of a cardiovascular program for injured athletes.
8. Discuss pharmacology in reference to the athletic population.
9. Discuss proper lifting and spotting techniques.
10. Discuss job application letters and professional resume.

PESS 445 Computer Applications in Health and Physical Performance
Applications of computer technology as it relates to the disciplines of health, physical education,

recreation and sport science.
2 Cr. DEMAND

PESS 448 Biomechanics

The application of anatomy and physics to the study of human motion.
Prereq.: PESS 248, PESS 249, PHYS 231 3 Cr. Spring

Student Learning Outcomes

1. Use math, anatomy and physics principles to explain the mechanics of injuries, injury testing techniques, taping and bracing procedures, and rehabilitation exercises.
2. Perform gait analyses of people walking and running.

PESS 449 Physiology of Exercise

A study of the physiological effects upon the human body.
Prereq.: PESS 349 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify metabolic energy system capacities and nutritional needs for physical activity.
2. Estimate body composition using a variety of assessments and contrast results to normative data.
3. Explain cardiovascular and respiratory systems and how they are neurologically and hormonally controlled.
4. Define the human muscular system and its adaptations to acute and chronic exercise.
5. Differentiate acute and chronic training adaptations of the cardiovascular and muscular systems.
6. Summarize factors affecting function based on environment and ergogenic aids.

PESS 450 Training and Conditioning Theory

Physiological, biochemical, and neuromuscular adaptations of training and the design of endurance, strength, and power training programs in order to enhance human performance in sport and fitness.
Prereq.: BIOL 202, BIOL 204, PESS 248, PESS 249, PESS 349 3 Cr. Fall

Student Learning Outcomes

1. Understand and know the muscular and skeletal features and functions of the human body and their involvement in exercise.
2. Understand and know the physiological and biochemical adaptations of the cardiovascular, respiratory, neuromuscular, and muscular systems to acute and chronic exercise training.
3. Understand and know the role of strength, endurance, agility, balance, coordination, speed, power and flexibility in sport and conditioning performance.
4. Understand and know the cycles of pre-season, in-season, and post-season endurance and power training in sports.
5. Understand and know those factors involved with establishing a conditioning and resistance training program for a team or individual sport.
6. Understand and know how to develop a conditioning and resistance training program for a team or individual sport based upon an analysis of needs.
7. Understand and know the testing and evaluation of procedures for conditioning and resistance training programs.
8. Understand and know of the health and safety risk factors associated with various strength and conditioning activities and practices.

PESS 461 Assessing Motor Performance of Children with Disabilities

Techniques and procedures for assessing motor performance of children with disabilities emphasizing available assessment, tools, interpretation of data, preparation of individualized Educational Programs. (IEPs), and due process.
Prereq.: PESS 312 3 Cr. Spring

Student Learning Outcomes

1. Explain the use, limitations, ethical concerns, administration, and interpretation of formal and informal assessments for students with identified disabilities that impact physical and motor fitness and how to communicate the results to the students, families, educators, and other professionals.
2. Apply an understanding of health-related aspects of physical and motor fitness in program planning.
3. Design individualized program plans that integrate evaluation results, student and family priorities, and concerns that incorporate academic and nonacademic goals in physical education.
4. Describe how to collaborate with children and youth and their families in making choices, given identified strengths and needs in physical and motor fitness, that impact academic, occupational, and other domains across the lifespan.
5. Describe how to collaborate with children and youth, families, and other service providers to locate community, regional, and state resources for further participation in leisure and recreational activities.

6. Discuss how to promote collaborative practices that respect the individual's and family's culture and values relative to access to physical education and recreation and leisure options across the lifespan.
7. Describe how to access and evaluate information, research, and emerging practices relevant to the field of developmental adapted physical education through consumer and professional organizations, peer-reviewed journals and other publications.
8. Identify & summarize the current federal laws that effect individuals with disabilities in the areas of assessment, IEP, and transition services.
9. Discuss the sensory input systems and brain processing paradigm.
10. Define the purposes of assessment.

PESS 462 Programming for Students with Disabilities: Grades PreK-6

Curricular programming, teaching techniques, and adaptations and/or modifications for students with disabilities in physical education settings, grades PreK to 6.
2 Cr. Fall

Student Learning Outcomes

1. Describe implications of medical, health, skeletal, and neurological conditions on motor learning including typical and atypical development across the life span.
2. Explain principles of anatomical structure, physiology, and kinesiology across the lifespan, including typical and atypical development.
3. Address the impact of single, multiple, and co-existing conditions of disabilities on motor functioning and motor skill acquisition.
4. Discuss the impact of typical and atypical motor development and function on the educational, social, and psychological well-being of students.
5. Design and adapt learning environments that support students with disabilities in safely and actively participating in physical and motor fitness.
6. Identify and coordinate educational roles and responsibilities with individualized education program plan team members and stakeholders in providing educational services that impact physical and motor fitness.
7. Engage in continuing professional development and reflection to increase knowledge and skill as a special educator and inform instructional practices, decisions, and interactions with children and youth and their families.
8. Describe and implement age-appropriate teaching techniques with students with disabilities in grades PreK-6.
9. Interpret assessment results and develop physical education IEP goals and objectives for students with disabilities in grades PreK-6.
10. Create age-appropriate physical education activities/lesson plans for students with disabilities in grades PreK-6.

PESS 463 Programming for Students with Disabilities: Grades 7-12

Curricular programming, teaching techniques, and adaptations and/or modifications for students with disabilities in physical education settings, grades 7 to 12.
2 Cr. Spring

Student Learning Outcomes

1. Provide students with exploration and learning experiences that supports life-long participation in physical recreation and leisure activities.
2. Describe how to develop students' self-advocacy and life skills relevant to independence, social skills, community and personal living, recreation, leisure, and employment.
3. Describe and implement age-appropriate teaching techniques with students with disabilities in grades 7-12.
4. Interpret assessment results and develop physical education IEP/ITP goals and objectives for students with disabilities in grades 7-12.
5. Create age-appropriate physical education activities/lesson plans for students with disabilities in grades 7-12.
6. Create a generic DAPE curriculum guide for students with disabilities in grades 7-12.
7. Discuss the role of disability sports in the DAPE curriculum for grades 7-12.
8. Differentiate the direct service delivery model and the consultation service delivery model of a DAPE program.

PESS 464 Developmental/Adapted Physical Education Practicum I: Grades PreK-6

Practical experiences teaching children with disabilities through direct delivery and/or consultation services in grades PreK to 6 physical education settings. S/U grading only.
2 Cr. Fall

Student Learning Outcomes

1. Design, implement, monitor, and adjust a variety of evidence-based instructional resources, strategies, and techniques, including scientifically-

based research interventions when available, to implement developmental adapted physical education services.
2. Select and adapt equipment used for instruction in physical and motor fitness.
3. Design and adapt learning environments that support students with disabilities in safely and actively participating in physical and motor fitness.
4. Monitor progress, adjust instruction, and evaluate the acquisition of skills related to developmental adapted physical education.
5. Apply the standards of effective practice in teaching students who have needs in the areas of physical fitness and gross motor skills in prekindergarten and primary, middle level, and secondary settings across a range of service delivery models.
6. Assess the motor performance of students with disabilities & write a thorough assessment report.
7. Design short-term objectives and long-term goals based upon assessment results.
8. Select appropriate physical education activities that will aid in meeting the unique goals and objectives of students with disabilities.

PESS 465 Developmental/Adapted Physical Education Practicum II: Grades 7-12

Practical experiences teaching children with disabilities through direct delivery and/or consultation services in grades 7 to 12 physical education settings. S/U grading only.
2 Cr. Spring

Student Learning Outcomes

1. Design, implement, monitor, and adjust a variety of evidence-based instructional resources, strategies, and techniques, including scientifically-based research interventions when available, to implement developmental adapted physical education services.
2. Select and adapt equipment used for instruction in physical and motor fitness.
3. Design and adapt learning environments that support students with disabilities in safely and actively participating in physical and motor fitness.
4. Monitor progress, adjust instruction, and evaluate the acquisition of skills related to developmental adapted physical education.
5. Apply the standards of effective practice in teaching students who have needs in the areas of physical fitness and gross motor skills in prekindergarten and primary, middle level, and secondary settings across a range of service delivery models.
6. Assess the motor performance of students with disabilities & write a thorough assessment report.
7. Design short-term objectives and long-term goals based upon assessment results.

PESS 490 Individual Research in Physical Education

Directed study in an approved emphasis area of the physical education major program.
Coreq.: 1-2 Cr. DEMAND

PESS 491 Psychology of Sport

Examining sport in terms of motivation, performance, and the relationship between sport and human development.
3 Cr. Spring

Student Learning Outcomes

1. Demonstrate knowledge of scientific and theoretical aspects of sport psychology; including personality, motivation, attention, arousal/anxiety, confidence, group dynamics, burnout, coaching behavior, and psychological interventions.
2. Apply theoretical and scientific knowledge of sport psychology to physical activity settings [e.g., sport, physical education, exercise, recreation].
3. Identify historical trends in sport psychology.
4. Distinguish between the types of sport psychology professionals.
5. Demonstrate information literacy by finding, assessing and using research related to sport psychology.

Physics (PHYS)

PHYS 100 Preparatory Physics

Prepares students who lack proper high school experience to take PHYS 231 or 234. Basic mathematical tools, physical principles, and problem solving techniques.
Prereq.: MATH 072 or high school algebra 3 Cr. DEMAND

Student Learning Outcomes

1. Communicate using SI units for physical quantities, convert numbers to scientific notation with appropriate significant figures, and convert from one system to another.
2. Distinguish between scalars and vectors, identify components of vectors; add, subtract and multiply vectors.
3. Define and distinguish between distance, position,

velocity, speed, and acceleration; apply kinematic expression to solve one and two dimensional motion problems.
4. "Produce free-body diagrams and apply Newton's laws; convert work problems to pictures--> pictures to mathematical equations--> perform algebraic steps needed to find solutions to problems--> scrutinize answers to see if ""the answer makes sense""--> produce correct units to stand alongside numerical solutions." 5. Identify applied forces, normal forces, gravitational force, frictional force, and use Newton's laws of motion to solve for static or dynamic quantities.
6. Define work and mechanical energy (kinetic and potential); use energy concepts to solve problems.
7. Define momentum and use its conservation to solve dynamical problems.

PHYS 101 Famous People of Science

The development of scientific method and current scientific outlook as illustrated by the lives and times of Aristotle, Galileo, Newton, Einstein, Curie, and others.
3 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

PHYS 103 Concepts in Physics

A thematic presentation of ideas, thought, and experimentation in physics. Topics from classical mechanics, sound, light, electricity, magnetism, thermodynamics, relativity, structure of matter. Not open to those who have taken PHYS courses other than general education at the 200-level or above.
3 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

PHYS 208 Energy and Environment

Energy forms, resources and conversions. Past and present patterns of energy use. Projections of future demand and supplies of energy. Resources and technologies of future energy alternatives. Environmental problems and conservation strategies associated with energy use.
3 Cr. Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES | GOAL AREA 10: ENVIRONMENTAL ISSUES

PHYS 231 General Physics I

Vectors; kinematics of uniformly accelerated motion; static equilibrium; work and energy; linear momentum; circular motion; rotational work, energy, and momentum; elasticity; fluid statics and dynamics; heat and temperature; kinetic theory of gases; laws of thermodynamics.
Prereq.: Grade of C- or better in MATH 112 or a satisfactory score on the appropriate math placement test, MATH 113, MATH 115, MATH 211, MATH 212, MATH 221, MATH 222, PHYS 100 4 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

PHYS 232 General Physics II

Hooke's law; simple harmonic motion; waves, standing waves, sound; electric forces and fields; electric potential; capacitance; resistance; DC circuits; magnetic forces and fields; induced EMF; inductance; impedance; AC circuits; E-M waves; geometric optics; wave optics; optical devices. Topics from modern physics.
Prereq.: PHYS 231 4 Cr. Fall | Spring | Summer GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

PHYS 234 Classical Physics I

Newton's laws of motion; work and energy; linear momentum; rotational motion; gravity; equilibrium and elasticity; periodic motion; fluid mechanics; temperature, heat and thermal properties of matter; laws of thermodynamics.
Prereq.: MATH 112, MATH 113, MATH 115 Coreq.: MATH 221 5 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

PHYS 235 Classical Physics II

Waves, normal modes, and sound; electrical force, fields, and potentials; capacitance and dielectrics; current and resistance; DC circuits; magnetic forces and fields; induction, AC current; E-M waves; geometric and wave optics; optical instruments.
Prereq.: MATH 221, MATH 222, PHYS 234. Grades of C or better in MATH 221 and PHYS 234. Coreq.: MATH 222 5 Cr. Fall | Spring GOAL AREA 3: NATURAL AND PHYSICAL SCIENCES

PHYS 237 Classical Physics for Geosciences

Simple harmonic motion, properties of waves, dispersion relations, and wave propagation characteristics. Basic electronics including voltage, current, resistance and capacitance, power supplies, diodes, and transistors.
Prereq.: MATH 221 and PHYS 234 Coreq.: Cr. Fall

Student Learning Outcomes

1. Identify basic electronic components and explain how they are used in simple circuits.
2. Formulate dispersion relations for wave motion in simple geophysical systems.

3. Calculate phase speeds and group velocities to identify dispersive and non-dispersive waves.

PHYS 294 Transition Course in Classical Physics

Selected topics in classical physics. Intended for students to make the transition from PHYS 234 (quarter system) to PHYS 235 (semester system).
Prereq.: PHYS 234, MATH 242 2 Cr. DEMAND

PHYS 304 Introduction to Biophysics

Thermal and modern physics, networks, and electromagnetism relevant to biological systems.
Prereq.: PHYS 232 3 Cr. DEMAND

Student Learning Outcomes

1. List, define, diagram, discuss, and explain key terms and concepts in biophysics.
2. Use physics principles to solve problems in the physics of biological systems.
3. Use physics principles to solve problems dealing with the effects of electric and magnetic fields and electromagnetic radiation on biological systems.
4. Use thermodynamics to solve problems in the physics of biological systems.

PHYS 308 Medical Informatics for Radiologic Technologists

Information systems and computer technology as applied to usage in Radiologic Imaging, charting, administration and research.
Prereq.: MATH 112, PHYS 231 3 Cr. Fall

Student Learning Outcomes

1. List, define, diagram, discuss, and explain key terms and concepts in medical imaging information systems and computer technology appropriate for an upper-division university course.
2. Use and explain the function of computer hardware and software.
3. Explain what relevant software can be used for and how it is used.
4. Solve numerical problems in medical informatics appropriate for an upper-division university course.
5. Recite, discuss, and apply regulations and standards related to medical informatics.
6. Define, explain, use, and calculate parameters used to quantify image quality appropriate for an upper-division university course.

PHYS 309 Radiologic Science Seminar

Four-part seminar to be taken concurrently with the two years spent in the clinical portion of the program.
Prereq.: Acceptance into clinical phase 1 Cr. Fall

Student Learning Outcomes

1. Analyze and evaluate a topic in radiologic science appropriate for an upper-division university course.
2. Compose a high quality paper on the seminar's topic.

PHYS 310 Radiologic Science Seminar

Four-part seminar to be taken concurrently with the two years spent in the clinical portion of the program. One credit per course each semester.
Prereq.: Acceptance into clinical phase 1 Cr. Spring

Student Learning Outcomes

1. Analyze and evaluate a topic in radiologic science appropriate for an upper-division university course.
2. Prepare a high quality paper, project, or presentation on the seminar's topic.

PHYS 328 Modern Physics I

Photons, Bohr-Rutherford model of the atom, wave-particle duality, Schroedinger equation, hydrogen atom wave functions, many-electron atoms, Maxwell-Boltzmann, Fermi-Dirac, and Bose-Einstein statistics.
Prereq.: MATH 222, PHYS 235 3 Cr. Fall | Spring

Student Learning Outcomes

1. Define the shortcoming of classical physics and describe the need for modifications to classical theory.
2. Articulate the experimental basis for attributing particle properties to waves and wave properties to particles.
3. Apply the probabilistic interpretation of wave function to simple problems.
4. Elaborate on the various forms of Schr÷dinger's equation and identify the meaning of each term in the equation(s); solve Schr÷dinger's equation for the problem of particle in a box, Potential Step and Barriers.
5. Define the overall framework of Classical Statistical Physics; Compare and Contrast Classical and Quantum Statistics.

PHYS 329 Modern Physics II

Special relativity, molecular bonding, quantum theory of solids, nuclear structure, radioactivity, nuclear reactions, elementary particles.
Prereq.: PHYS 328 3 Cr. Spring

Student Learning Outcomes

1. Describe the Special Theory of Relativity and solve problems using time dilation and space contraction.
2. Understand the basic principles of the Physics of 2nd half of 20th century including but not limited to Atomic structure, Molecular structure, Solid State Physics, Nuclear Physics and Particle Physics.
3. Describe the structure of the nucleus of an atom and describe and quantify nuclear decay.

PHYS 333 Optics

Refraction, geometrical optics, optical instruments, diffraction, interference, polarization, and other aspects of physical optics.
Prereq.: MATH 222, PHYS 235 3 Cr. Fall

Student Learning Outcomes

1. Analyze geometrical optics problems with geometry and paraxial approximation.
2. Derive and apply equations of wave optics in interference, diffraction, reflection, polarization and optical gratings.
3. Analyze geometrical optics and polarization problems with matrix method.
4. Perform geometrical optics, diffraction and reflection experiments and analyze result.
5. Analyze line spectra with prism spectrometer.
6. Construct an interferometer and analyze properties of lab lasers.

PHYS 334 Thermal Physics

Laws of thermodynamics and Applications. Microscopic descriptions of many-particle systems. Statistical (ensemble) mechanics connecting individual particle dynamics to bulk thermal properties of matter. Classical and quantum mechanical effects. Terrestrial and astrophysical applications.
Prereq.: PHYS 235, MATH 222 Coreq.: PHYS 328 3 Cr. Even Fall

Student Learning Outcomes

1. Apply laws of thermodynamics (zero-th, first and second laws) to practical problems in order to establish (i.e. calculate) relationships amongst macroscopic thermodynamic variables.
2. Make connections between microscopic states of systems and macroscopic states which determine thermal physics observables.
3. Describe thermodynamic processes and cycles and then solve problems relating to efficiencies.

PHYS 338 Electromagnetic Fields

Static electric fields, steady currents, static magnetic fields, time-dependent fields, Maxwell's equations, plane electromagnetic waves.
Prereq.: MATH 325, PHYS 235, PHYS 346 4 Cr. Even Spring

Student Learning Outcomes

1. Identify and compute the electric field, electric potential and electric potential energy for a variety of electrostatic charge distributions.
2. Recognize and analyze linear dielectrics.
3. Compute, using general principles or symmetries, magnetic fields for a wide variety of current configurations.
4. Communicate and then apply Maxwell's equations in vacuum and in matter.

PHYS 346 Applications in Theoretical Physics

Applications of matrix methods to linear physical systems; applications of vector calculus to 3-dimensional physical systems. The method of series solutions applied to physical wave equations, applications of complex numbers and of Fourier and Laplace transforms.
Prereq.: PHYS 235 3 Cr. Fall | Spring

Student Learning Outcomes

1. Simplify and manipulate complex numbers, including expressions involving elementary functions of complex variables.
2. Use and explain the physical meaning of divergence, gradient, and curl.
3. Use series solution methods to solve ordinary differential equations.
4. Apply methods of partial differential equations to solve physics and applied physics problems.

PHYS 354 Clinical Radiologic Science I

Digital image acquisition and display. Pharmacology and drug administration. Radiation protection. Radiographic pathology.
Prereq.: Acceptance into an affiliated School of Radiologic Technology. Coreq.: 1-16 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Define and explain radiographic and anatomic terminology.
2. Summarize and apply the HIPAA regulations.
3. List and explain legal and ethical issues in radiologic technology.
4. List and explain the characteristics and sources of

different types of radiation.
5. Identify and explain the purpose of all components of an imaging system.
6. Perform calculations and solve problems in radiation physics.
7. Use imaging equipment to produce images.
8. Identify and locate appropriate patient anatomy and identify and use appropriate patient positioning.
9. Select, use, and explain safe and appropriate radiographic procedures.
10. List, explain, and apply the principles of radiation protection.

PHYS 408 Physics of Digital Medical Imaging

Digital signal detection and processing as applied to such radiology imaging modalities as CR/DR, CT, MRI, US and NM/PET.
Prereq.: MATH 112, PHYS 232 3 Cr. Spring

Student Learning Outcomes

1. Use physics principles to solve problems in radiation physics, interactions of radiation with matter, radiation production, radiation units, and radiation detection appropriate for an upper-division university course.
2. List, define, diagram, discuss, and explain key terms and concepts in medical imaging appropriate for an upper-division university course.
3. Explain how images are produced and use physics principles to solve imaging problems.
4. Apply physics principles, use appropriate safety regulations, and solve problems in radiobiology and radiation protection appropriate for an upper-division university course.

PHYS 409 Radiologic Science Seminar

Four-part seminar to be taken concurrently with the two years spent in the clinical portion of the program. One credit per course each semester.
Prereq.: Acceptance into clinical phase 1 Cr. Fall

Student Learning Outcomes

1. Analyze and evaluate a topic in radiologic science appropriate for an upper-division university course.
2. Prepare a high quality paper, project, or presentation on the seminar's topic.

PHYS 410 Radiologic Science Seminar

Four-part seminar to be taken concurrently with the two years spent in the clinical portion of the program.
Prereq.: Acceptance into clinical phase 1 Cr. Spring

Student Learning Outcomes

1. Analyze and evaluate a topic in radiologic science appropriate for an upper-division university course.
2. Prepare a high quality paper, project, or presentation on the seminar's topic.

PHYS 415 Undergraduate Research

Independent experimental or theoretical research under staff supervision. Recommended to all undergraduate physics majors.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Identify the underlying physics principles related to a specific research topic and/or research problem.
2. Develop and implement a research plan to address a specific research topic or problem.
3. Collect and analyze data and information in an attempt to resolve a specific research problem.
4. Articulate the research results through written, oral and/or poster presentations.

PHYS 420 Seminar

Lectures, readings, discussion on selected topics. May be repeated.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Decipher the physics meaning contained within assigned readings.
2. Communicate details of selected experimental and theoretical physics advances.
3. Solve physics problems based upon lectures and readings and then share the details in discussions.

PHYS 430 Advanced Physics Laboratory

Experiments relating to topics studied in upper-level physics courses.
Prereq.: PHYS 328 2 Cr. Fall

Student Learning Outcomes

1. Appraise and design the procedures for taking data for advanced physics measurements.
2. Measure the data and calculate the relative uncertainties and relative errors for their data.
3. Explain the instruments used in measurement.
4. Summarize results.
5. Write comprehensive reports on experiments.

PHYS 431 Introduction to Quantum Mechanics

The Schroedinger wave equation in differential equation, Dirac, and matrix notation. Application to fundamental systems including the harmonic

oscillator, potential barriers, spin, and the hydrogen atom.
Prereq.: PHYS 329, PHYS 346 3 Cr. Odd Fall

Student Learning Outcomes
1. Understand the mechanics of operators, eigenstates and eigen values.
2. Develop free-particle and bound-state solutions to the Schr÷dinger equation.
3. Construct simple solutions for Hydrogen atom, angular momentum and spin systems.
4. Apply techniques such as time-independent perturbation theory.

PHYS 432 Advanced Experimental Physics
Advanced Experimental Physics, Hyperfine and Zeeman spectroscopy, Pulsed Nuclear Magnetic Resonance, Electron Spin Resonance, Scientific Writing.
Prereq.: PHYS 328 2 Cr. Fall

Student Learning Outcomes
1. Use applications of advanced modern physics in completion of lab experiments.
2. Use advanced physics measurement techniques.
3. Write and rewrite scientific articles on their advanced Laboratory measurements.

PHYS 435 Laser Optics
The interaction of light with matter including conditions for laser gain and oscillation, resonance cavities, and Gaussian beams. Examples of laser systems and applications.
Prereq.: PHYS 333 3 Cr. Odd Spring

Student Learning Outcomes
1. Apply principles of spontaneous emission, absorption and stimulated emission in the context of lasers.
2. Compute mode and stability conditions for laser cavities.
3. Discuss light-matter interactions in the context of laser amplifiers.
4. Compute rate equations for laser amplifiers.
5. Discuss Q-Switching and mode locking techniques.

PHYS 436 Advanced and Fourier Optics
Multilayer dielectric films, Fresnel reflection and diffraction, applications of Fourier optics.
Prereq.: PHYS 333 3 Cr. Even Spring

Student Learning Outcomes
1. Define the optical properties of multilayer films and compute reflectance and transmittance.
2. Apply physical optics to Fresnel diffraction problems.
3. Compute two-dimensional Fourier Transforms with an emphasis on imaging, convolution and autocorrelation.
4. Define and calculate the optical transfer and modulation transfer function for an optical system.

PHYS 440 Classical Mechanics
Single particle Newtonian dynamics, Lagrangian methods, central force motion, systems of particles, non-inertial reference frames, dynamics of rigid bodies, oscillations and normal modes.
Prereq.: PHYS 235, PHYS 346 4 Cr. Odd Spring

Student Learning Outcomes
1. Apply Newton's laws to a wide variety of single-particle dynamics problems.
2. Compute the gravitational field near spherical and non-spherical objects.
3. Discuss the Brachistochrone problem.
4. Define and apply the concept of a Lagrangian for particles and systems of particles in mechanics.
5. Recognize and calculate normal modes of oscillation for coupled linear oscillators.

PHYS 442 Topics in Biomedical Engineering
Instrumentation, data analysis and phenomenological principles of clinical interest.
Prereq.: ECE 312, ENGR 334, MATH 325 3 Cr. DEMAND

Student Learning Outcomes
1. Gain experience and demonstrate proficiency using scientific instrumentation appropriate for complex problems in biomedical design and engineering.
2. Carry out critical data analysis leading to scientific conclusions on systems with clinical applications.
3. Discuss phenomenological models for biomedical systems, including mathematical descriptions.

PHYS 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

PHYS 445 Electro-optics
E-M waves in anisotropic materials; electro-optic, acousto-optic and nonlinear optical effects;

semiconductor light sources and detectors.
Prereq.: PHYS 333, PHYS 338 or ECE 391 3 Cr. Odd Fall

Student Learning Outcomes
1. Apply the principles of electro-magnetism in the context of optical systems.
2. Compute the index ellipsoid for anisotropic birefringent optical materials.
3. Calculate frequency shift and beam deviation in acousto-optical materials.
4. Discuss frequency doubling in non-linear optical materials.

PHYS 450 Special Topics in Physics
Intensive study in basic and applied physics. Topics selected from relativity, medical physics, biomedical engineering, and other topics.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Communicate an understanding of the basic physics principles contained within the special topic.
2. Discuss familiarity with the historical and scientific context surrounding development of the topic and the modern-day applications and usages.
3. Analyze data and compare with theoretical descriptions and models to critically scrutinize both.

PHYS 451 Special Topics in Physics
Intensive study in basic and applied physics. Topics selected from relativity, medical physics, biomedical engineering, and other topics.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Communicate an understanding of the basic physics principles contained within the special topic.
2. Discuss familiarity with the historical and scientific context surrounding development of the topic and modern-day applications and usages.
3. Analyze data and compare with theoretical descriptions and models to critically scrutinize both.

PHYS 452 Special Topics in Physics
Intensive study in basic and applied physics. Topics selected from relativity, medical physics, biomedical engineering, and other topics.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Communicate an understanding of the basic physics principles contained within the special topic.
2. Discuss familiarity with the historical and scientific context surrounding development of the topic and modern-day applications and usages.
3. Analyze data and compare with theoretical descriptions and models to critically scrutinize both.

PHYS 453 Special Topics in Physics
Intensive study in basic and applied physics. Topics selected from relativity, medical physics, biomedical engineering, and other topics.
Prereq.: PHYS 235 Coreq.: 1-3 Cr.

Student Learning Outcomes
1. Communicate an understanding of the basic physics principles contained within the special topic.
2. Discuss familiarity with the historical and scientific context surrounding development of the topic and modern-day applications and usages.
3. Analyze data and compare with theoretical descriptions and models to critically scrutinize both.

PHYS 454 Clinical Radiologic Sciences III
Advanced theory and practice of imaging of organs. Producing radiographic images of optimal quality. Film processing, film holders and intensifying screens. Film evaluation.
Prereq.: Acceptance into an affiliated School of Radiologic Technology. Coreq.: 1-16 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify anatomic structures as they relate to radiographic imaging and explain the function of each structure.
2. Select, explain, and use appropriate radiographic procedures.
3. Explain how images are acquired and processed.
4. Use safe and appropriate techniques to produce radiographic images of optimal quality.
5. Evaluate image quality and propose and discuss methods for improving image quality.
6. List and explain the basic principles of computed tomography.

PHYS 455 Special Topics in Physics
Intensive study in basic and applied physics. Topics selected from relativity, medical physics, biomedical engineering, and other topics.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Communicate an understanding of the basic physics principles contained within the special topic.
2. Discuss familiarity with the historical and

scientific context surrounding development of the topic and modern-day applications and usages.
3. Analyze data and compare with theoretical descriptions and models to critically scrutinize both.

PHYS 456 Methods and Materials for Teaching Physical Science

Modern techniques and curricula for teaching secondary school physical science.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Develop engaging laboratory activities appropriate for secondary physical science instruction.
2. Undertake data analysis of measurements, uncertainties, and draw scientific conclusions for the laboratory activities based on the analysis.
3. Discuss plans to encourage students to communicate experimental procedure, theory, and conclusions surrounding the experiments. These plans may include building a set of laboratory report expectations.

PHYS 476 Workshop: Solar Energy

The energy problem, the use of solar energy to help solve this problem, and theoretical background for the design and construction of a solar energy system.
1 Cr. DEMAND

Student Learning Outcomes

1. Confront the energy problem: usage, fossil fuel resources and problems with releasing the carbon, and communicate the urgency to seek solutions.
2. Identify alternative energies and compare/contrast the utility of each.
3. Discuss solar energy technologies, design and future possibilities.

PHYS 486 Workshop: Holography

Basic principles of holography. Constructing simple holographs.
1 Cr. DEMAND

Student Learning Outcomes

1. Compare and contrast various historical hologram types and methods.
2. Assess laboratory safety strategies, specifically related to chemicals and lasers.
3. Create and evaluate presentations and reports on holography topics.
4. Identify research strategies (both print and online) and conduct research in topics related to holography.
5. Exercise laboratory skills to produce holograms using optical techniques.

Planning and Community Development (CMTY)

CMTY 195 Community and Democratic Citizenship

The role of community in the United States, and the relationship between community, active citizenship and civic engagement. Issues of diversity and sustainable communities.
3 Cr. Fall | Spring GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

CMTY 200 Cities, Suburbs, and Small Towns

Explores the social, economic, historical, and architectural dimensions of urban areas and urbanism. Focus is on problems, issues, alternatives, and policies that shape urban form and human societies globally and in the U.S.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

CMTY 222 Diversity in the American Experience (Diversity/RIS)

Interdisciplinary exploration of selected aspects of the culture and experiences of women and minority groups within the U.S. Focus on developing a theoretical and practical understanding of the concept of diversity as it relates to the American experience.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

CMTY 266 Community in America

The historical, philosophical, and cultural development of communities in the U.S. Analysis of the impact that race, ethnicity, gender, and class have on communities.
3 Cr. Fall | Spring

CMTY 333 Studying Communities

Research on sustainable communities. Skills and techniques, models, and theoretical and ethical issues of studying community from the perspective of sustainability. Students will design, develop, and

implement a community-based research project.
3 Cr. Spring

Student Learning Outcomes
1. Identify, compare, and contrast, the various types of social science research.
2. Identify and describe the various forms of data collection and data analysis.
3. Evaluate the appropriateness of the various types of research for specific research questions.
4. Identify the steps involved in the structuring and designing of a research study and apply them to conduct a small scale research study.
5. Select appropriate sources; write annotated bibliographies, and literature reviews.
6. Prepare and administer questionnaires and/or surveys for primary data collection.
7. Write a research paper and prepare a research presentation.

CMTY 350 Community Development Theory, Practice and Ethics

Common planning methods, programs, and ethical considerations framing the practice of importance to planners and development practitioners.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Cite, discuss, compare and contrast the main theoretical perspectives and approaches to Community Development.
2. Compare and contrast the fields of community development and planning; discuss and analyze the contribution of each area to urban planning and development.
3. Recite and discuss the professional planning code of ethics and apply it to analyze planning practice case studies.
4. Compile a community asset inventory, and conduct an asset-based community assessment.
5. Identify, describe the profit, non-profit, and public actors for community development at the local/regional, state and national levels.
6. Identify, describe, discuss, and analyze various local, regional, state, and national programs, initiative for community development and describe their application to the local context.
7. Write small position papers on specific topics of community development and prepare a literature review on a pertinent community development topic.

CMTY 354 Planning for Equity, Diversity, and Social Justice

The role of urban planning through the lens of equity, diversity, and social justice emphasizing the role of planners in expanding choice and opportunity for all persons. Special attention is given to planning processes aimed to the needs of the disadvantaged and the promotion of racial and economic integration.
Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Analyze past and current social systems and their disparities 2. Discuss and describe issues of equity, diversity, and social justice in the context of communities 3. Evaluate and describe planner's role in expanding choice and opportunity for all persons
4. Evaluate planning processes that include the needs of the disadvantaged and reduce inequities

CMTY 363 Downtown Development

Downtown revitalization in terms of design, preservation, organization, promotions, and economic restructuring using the Main Street Approach.
3 Cr. Fall

Student Learning Outcomes
1. Be able to explain why downtowns are important to communities.
2. Be able to discuss and describe the history and architecture of main streets.
3. Be able to identify, explain, and describe the range of urban planning strategies utilized to enhance the downtown.

CMTY 367 Housing Policies and Programs

Theoretical and practical issues regarding housing policies and programs in the United States.
3 Cr. Fall

Student Learning Outcomes
1. Identify, describe, discuss, and review the various eras in the development of housing policy in the United States.
2. Identify, describe, and discuss housing policies and housing-related issues and trends in the local, regional, and national context.
3. Explain and demonstrate housing+s relation to and contribution to community and economic development, and growth.
4. Analyze and assess the local and regional housing situation and prescribe appropriate course of action.

5. Classify, analyze, and evaluate federal, state, and local housing programs, policies, and initiatives, and organizations aimed at facilitating the development of housing, income integration, housing mobility, and housing affordability.

CMTY 369 Transportation Planning in Communities

Multi modal transportation systems (pedestrians, bicycles, automobiles, and mass transit), community impacts (traffic congestion, environmental, energy, economic, social, safety, parking) benefits, and strategies.
3 Cr. Spring

Student Learning Outcomes

1. Identify, discuss, and describe the main transportation policies and their influence in shaping urban/metro environments.
2. Discuss and analyze the transportation planning process for urban/metro environments.
3. Describe and discuss the economic and financial aspects of transportation.
4. Analyze and forecast travel demand for a given urban area.
5. Evaluate environmental impacts of transportation in lieu of sustainable transportation development and sustainable urban environments.
6. Explain the social and environmental justice issues in transportation.
7. Analyze the relationship between transportation, land use, and planning.

CMTY 394 Urban Planning

Theory, objectives, and methods of the planning process, particularly in the United States.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

Student Learning Outcomes

1. Describe the key forces responsible for urban development in the U.S.
2. Analyze current legal issues in planning.
3. Explain how tools available to the professional planner can use used to achieve desired outcomes.
4. Compare and contrast the major subfields of planning (such as transportation, economic development, environmental, etc.) and discuss their contribution to the development of cities.

CMTY 422 Land Use Planning and Zoning

Basic and advanced tools, applications, and frameworks of contemporary land use planning and zoning in the United States.
3 Cr. Fall

Student Learning Outcomes

1. Examine the history of public land use control mechanisms, particularly zoning.
2. Distinguish between the different types of institutions involved in the planning process.
3. Identify the main shortcomings of conventional land use planning.
4. Examine land use policies in relation to the market, and the institutional and social context in which they intervene, and how to enable better and more just patterns of urban development and growth.
5. Evaluate the value of various innovations in contemporary land use planning practice.

CMTY 428 Site Planning and Development

Processes and tools for site planning, preparation, development, and implementation.
3 Cr. Spring

Student Learning Outcomes

1. Distinguish between the different types of relevant laws, rules and regulations governing site project approvals.
2. Evaluate natural site conditions and ecosystems (e.g., slopes, soils, and climate).
3. Evaluate the capability of the site and the existing infrastructure to support project's program requirements.
4. Identify restrictions and opportunities of the site.
5. Formulate a concept project for a site based on user's needs and capability of the site and existing infrastructure to support the program requirements.
6. Students will be able to discuss and analyze alternatives for the implementation of a site project.

CMTY 444 Internship

Internships in a planning or community development organization approved in advance by the instructor. Only 3 credits of the internship course is counted towards the Planning and Community Development major.
Coreq.: 1-16 Cr. Fall | Spring | Summer

CMTY 450 Community Heritage

American shaped environment from colonial period until present. Will focus on meanings of prototypical building forms and analyze key roles a community's shaped environment can play in healthy community

development.
3 Cr. Fall

Student Learning Outcomes
1. Be able to discuss and describe the survey of, and other major issues in the field of historic preservation and heritage studies in United States, as well as, some discussion of world heritage sites and international perspectives.
2. Be able to identify, describe, and explain the urban planning techniques used for preserving historic buildings, neighborhoods and districts, as well as, some of the landmark legal decisions and legislation that have shaped heritage preservation practice in the U.S.A.

CMTY 451 Community Design
Will examine meaning of design, forces affecting quality of natural and built environments, basic design elements and role of design professional.
3 Cr. Spring

Student Learning Outcomes
1. Be able to describe the physical design of cities, towns, and neighborhoods as a component of community development practice.
2. Be able to discuss, describe, and explain the relationships between community design, social justice, and sustainability.
3. Develop basic visual literacy, including graphic communication skills, visual analysis, and a design vocabulary.
4. Be able to recognize and describe the dominant spatial forms in the U.S., and develop visual, written, and oral communication that helps to explain sustainable forms to a public audience.

CMTY 452 Environmental Planning
Theory, tools, principles and techniques, policy, regulation, and socio/economic impacts on communities emphasizing sustainable development, land use, economic growth, transportation, and environmental impact and mitigation issues.
3 Cr. Fall

Student Learning Outcomes
1. Identify, recite, explain, and discuss major theoretical concepts, policies, and laws pertaining to environmental planning.
2. Explain current environmental challenges as connected to economic growth, land use, transportation, and waste management issues impacting communities.
3. Collect, analyze, and interpret environmental data.
4. Evaluate and synthesize current information and apply it to appropriate planning and policy decision-making related to Sustainable Planning and Development.

CMTY 454 Regional Planning
Comparative regional planning. Economic distribution and ideological differences. Topical.
3 Cr. DEMAND

Student Learning Outcomes
1. Distinguish between the different types of regions utilized for planning purposes.
2. Examine contemporary issues facing regions from the perspective of different socio-economic groups.
3. Formulate contemporary regional economic development proposals.
4. Evaluate alternative regional development plans.

CMTY 455 Grant Development
Raising funds for public or non-profit organizations in Minnesota. Project or program design, budget creation, objective and result delineation and writing for grants from foundations, government and corporations.
3 Cr. Spring

Student Learning Outcomes
1. Conduct research on area and regional nonprofit and public organizations for purposes of identifying them, analyzing/understanding their structure, funding needs, priorities, and funding sources.
2. Develop, write, and submit a complete grant application for a specific nonprofit or public organization.
3. Develop grant objectives and methods, compose project description, and explain need, challenge or opportunity for the grant application to address.
4. Demonstrate understanding of income and revenue concepts to prepare a budget for grant application.
5. Plan and develop evaluation criteria so grant impact can be measured by nonprofits.

CMTY 464 Local Economic Development
Context, theory, process, and practice of local economic development policies for communities.
3 Cr. Spring

Student Learning Outcomes

1. Cite, discuss, compare and contrast the main theoretical perspectives and approaches to local Economic Development.
2. Apply economic development analytic techniques to evaluate changes in local/regional, state and federal industrial sectors.
3. Explain, analyze, and assess, local, regional, and state strategies, sectoral policies, initiatives, and incentives for economic development.
4. Interpret results of economic analysis for the local/regional and state environments and evaluate/prescribe specific actions necessary for economic development and growth.

CMTY 466 Issues in Community Studies

A seminar on a special topic or issue in Community Studies. May be repeated under different topics.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Be able to identify research strategies (both print and online) and conduct research for planning and community development.
2. Be able to research a contemporary issue in planning and community development and describe the impact on people living there.
3. Be able to analyze events or causes leading to a specific issue in planning and community development issue.
4. Be able to evaluate solutions to problems caused by the specific issue in planning and community development issue(s).

CMTY 493 Internship

Students will be placed on a part-time basis with a public, private, or non-profit organization, participating in research, planning, public meetings, analysis, and decision-making. Majors only; permission required
6 Cr. Fall | Spring

Student Learning Outcomes

1. Gain experience and professional skills in the field of planning and community development.
2. Practice and enhance presentation, writing, public speaking skills, and other transferable skills.
3. Apply, practice, and refine planning tools, techniques, processes, and planning skills.
4. Integrate academic knowledge and theory with professional practice.
5. Create a clear, individualized career development strategy.

CMTY 494 Senior Colloquium

An interdisciplinary senior-level seminar to help students synthesize various concepts, skills, and field experiences. Helps students to create a clear, individualized career development strategy. By permission only.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Synthesize and analyze various planning theoretical concepts, with field experience during the internship period.
2. Review, discuss, analyze and present major theoretical and applied planning theory, practice, and policy related literature and prepare briefing papers.
3. Explain and evaluate current planning efforts at the local and state level as they relate to sustainability.
4. Explain the professional planning code of ethics, and apply it to analyze planning practice case studies.
5. Assess, evaluate, and analyze local, regional, and state level planning projects.

Political Science (POL)

POL 101 Political Ideas and Institutions

Comparative analysis of the major philosophies, institutions, and processes of government.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

POL 111 American National Government

Understanding of U.S. institutions of government and the role of the citizen in the democratic process in the United States.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

POL 191 Introduction to Political and Legal Reasoning

Introduction to critical reasoning, types of argumentation, and the proper use of authorities and evidence in the American political and legal system. Examine the differences between theoretical, policy, and legal argumentation.
3 Cr. Fall | Spring | Summer GOAL AREA 2: CRITICAL REASONING

Student Learning Outcomes

1. Identify the difference between a fact, an assumption, and an argument.
2. Identify the different types of arguments/reasoning: deductive, inductive, causal, and analogy.
3. Research and collect credible, objective facts from a variety of sources to be used as evidence in making arguments.
4. Articulate the logical connection between facts, arguments, and conclusions.
5. Identify the common mistakes and flaws in making arguments.
6. Explain complex theoretical, political, and legal problems from a variety of perspectives, recognizing the strengths and weaknesses of each.
7. Recognize bias in arguments and remove it.
8. Argue different and often opposing sides of the same issue.

POL 192 Critical Reasoning: Issues and Events in American Politics

Critical reasoning, types of reasoning, argumentation and proper use of authorities and evidence to understand contemporary issues and current events relevant to the American political and governing systems.
3 Cr. Fall | Spring | Summer GOAL AREA 2: CRITICAL REASONING

Student Learning Outcomes

1. Students will analyze forms of political discourse and explain argument components such as premises, types of evidence, reasoning, and conclusions. This will be accomplished with hypothetical and real world examples related to American government and 2. Students will identify and explain differences between deductive and inductive reasoning, causal arguments, and arguments by analogy in different contexts related to American government and politics.
3. Students will identify and explain all parts (premises, evidence, reasoning, conclusions) of political arguments related to explaining contemporary issues and current events related to American government and politics.
4. Students will discuss and explain inductive and deductive reasoning in assertions and arguments used to achieve political and policy goals in the context of American government and politics.
5. Students will analyze and explain common flaws in political argumentation related to American government and politics.

POL 201 Political Science Research Methods

Introductory concepts and methods for studying government, planning research, accessing sources, presentation of research, and term papers. Integrated.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Explain how research supports the formation of political policy and influences administrative decision making.
2. Evaluate empirical research published in referred journals.
3. Create a research proposal based on primary sources.
4. Complete a set of basic statistical analyses using primary political science data.

POL 251 Introduction to World Politics

The nation-state: national power and restraints on national power such as international law and organization.
3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

POL 291 Pre-Law Studies

American legal system for students considering a law-based course of study or career. Can be taken P/F or for grade.
2 Cr. DEMAND

Student Learning Outcomes

1. Describe the U.S. federal and Minnesota state court systems; explain their differences; and identify various types of specialty courts.
2. State the difference between civil law and criminal law and explain the underlying philosophical justifications for each; state the difference between common law and statutory law and explain the underlying philosophical justifications for each.
3. Describe the general content of the following areas of the law: torts, contracts, property, criminal law, family law, trusts and estates, and consumer law.
4. Identify the various participants in the legal system and explain the role played by each of the following: judges, attorneys, specialized actors, and advocacy groups.
5. Identify the difference between private and public law practice and various legal careers.
6. Explain how American attorneys are educated and trained in the historical and modern eras.
7. Identify the personal, academic, and professional

characteristics that make for successful legal practitioners.
8. State the personal, practical, and policy challenges faced by individuals (and particularly those within certain diversity categories) who pursue legal careers.
9. Assess their interest in additional study in law-related courses and their suitability to undertake law-related careers.

POL 310 US Politics of Race, Ethnicity, and Immigration (Diversity/RIS)

African Americans, Asian Americans, Hispanic Americans, and Native Americans and how they have been shaped and have shaped the political system.
3 Cr. Fall GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

Student Learning Outcomes

1. Students will be able to evaluate and assess the political process of race, ethnicity, and immigration in the American political system.
2. Students will be able to compare, contrast, and analyze alternative political strategies of African, Asian, Hispanic, and Native Americans.
3. Students will be able to describe theoretical foundations in the US politics of race, ethnicity, and immigration.
4. Students will be able to evaluate strategies and programs of government in response to the demands of these ethnic groups.
5. Students will be able to analyze the immigration processes of ethnic groups and how they arrived in the United States.

POL 311 Minnesota Politics

Examination of formal structures, citizen participation, and major decision-making bodies. Some attention to local government.
Prereq.: POL 212 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identity three fundamental theories of the state government and politics.
2. Apply the theories to guide the analysis of the foundations, institutions, and political behavior of the state.
3. Evaluate how consistency of the theories and practices of the state politics.

POL 312 State and Local Government

Sub-national politics in its social, ideological, and federal setting. Covers both formal structure and political process. Focuses on the individual's role.
Prereq.: POL 111 3 Cr. Spring

POL 313 Metropolitan Area Government

Government forms and political activities in large urban areas. Shows relationship between politics and such problems as transportation, crime, race, metro reform.
3 Cr. Odd Fall

Student Learning Outcomes

1. Describe political change in metro areas analyze how that change can impact various groups in urban society.
2. Learn the nature of ethnic and racial power changes and shifts in urban America and describe what has been a political, social and economic trap.
3. Evaluate economic development strategies and how they may harm and benefit population groups in central cities.
4. Analyze theories of who governs cities and suburbia and how those theories impact policy issues.

POL 314 Political Parties and Interest Groups in the U.S.

Role and behavior of political parties and interest groups in American politics, elections and governance.
3 Cr. Odd Spring

Student Learning Outcomes

1. Discuss and explain the rule of political parties and interest groups as an intermediary (between voters and government structures) institution and will be able to analyze and explain the role of political parties in the electorate, elections and in government.
2. Discuss and explain the history and contemporary form and structure of American political parties.
3. Analyze and explain the historical and contemporary roles in interest groups in American government and politics.
4. "Analyze and explain the ""tools"" such as lobbyist and grassroots lobbying used by interest groups to influence political outcomes." 5. Identify interest groups campaign activities and analyze limits on those activities.

POL 315 Campaigns and Elections

Campaigns and elections at the national, state, and local government levels. Theoretical and applied generalizations about factors affecting elections and voting, role of political parties and interest groups, campaign finances, and campaign strategy and tactics.
3 Cr. Even Fall

Student Learning Outcomes
1. Students will analyze and explain the theoretical place and role of elections in the American political systems at the local, state and national levels.
2. Students will discuss and explain the history and contemporary form and structure of elections and campaigning in American political systems.
3. Students will analyze the contemporary role of political parties and interests in campaigns and elections in American political systems.
4. Students will discuss and explain how financial resources are raised throughout the American political systems and the influence of such resources on election outcomes.
5. Students will analyze and explain the contemporary campaign strategies in the American political systems.
6. Students will identify and critique reforms for campaigns and elections in the American political systems.

POL 320 Women in Politics (Diversity)
Politics and governments affects women's lives today, women's participation in the political process in order to influence the course of public policy.
Prereq.: POL 111 3 Cr. Even Fall GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

POL 331 Governments of Western Europe
Comparison of governmental organization and processes in nations of Western Europe, United Kingdom, France, West Germany and Italy.
Prereq.: POL 101 3 Cr. Fall

Student Learning Outcomes
1. Describe the historical political trends that have shaped the political character, governmental institutions, and public policies of European countries today.
2. Describe the varied institutional arrangements within European countries and analyze the appropriateness of unique arrangements in each particular country from the perspective of those living in that country.
3. Contrast institutional arrangements and policy outcomes across countries and explain why differences exist and how these differences affect policy outcomes.
4. Explain the workings of the European Union and analyze; whether the EU is a supra-national or super-national organization, its powers and limitations, how expansion affects the nature of the EU and its policy positions, the arguments of 'Euro-skeptics', the EU's effectiveness in meeting its own stated goals, and its place in the larger international arena.
5. Analyze the current state of political affairs in Europe and be able to offer various possible solutions for solving country specific as well as European wide problems.

POL 332 Politics of Russia and the Successor States
National integration, political culture, government institutions and patterns of administration along with the foreign policy of the nations of the former Soviet Union.
Prereq.: POL 101 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Review the common political history of Russia and the Successor States.
2. Examine the different cases of political transition from Russia and the Successor States.
3. Assess the relative successes and failures of cases of political and economic transition in Russia and the Successor States.
4. Distinguish between the competing historical, structural, and cultural factors that influence the cases of political transformation found in Russia and the Successor States.

POL 333 Latin American Government and Politics
Dilemmas of political development in Latin America with an emphasis on Argentina, Brazil, Chile, Mexico, and Cuba.
3 Cr. Fall | Spring | Summer GOAL AREA 8: GLOBAL PERSPECTIVES

POL 334 Middle East Government and Politics
Political behavior and institutions in countries of the Middle East.
Prereq.: POL 101 3 Cr. Fall GOAL AREA 8: GLOBAL PERSPECTIVES

POL 335 African Government and Politics (Diversity)
Political behavior and institutions of Africa with emphasis on Sub-Saharan Africa.

Prereq.: POL 101 3 Cr. DEMAND GOAL AREA 8: GLOBAL PERSPECTIVES

POL 336 Asian Government and Politics

Political behavior and institutions in countries of East and South Asia with emphasis on Communist China, Japan and India.
Prereq.: POL 101 3 Cr. Fall

Student Learning Outcomes

1. Identify basic facts about Asian political history, social institutions and religions and how Asian cultures have been stereotyped in the West.
2. Demonstrate an understanding of major themes in Asian political history and cultural development as they relate to Asian states and political institutions.
3. Demonstrate an understanding of contemporary and traditional cultural, social and political diversity within Asia.
4. Discuss the significance of gender and class in the socioeconomic and political contexts of traditional and modern Asia.

POL 337 Emerging Political Issues in the Nonwestern World (Diversity).

Analysis of political implications of emerging issues in the nonwestern world.
Prereq.: POL 101 3 Cr. Fall | Spring GOAL AREA 8: GLOBAL PERSPECTIVES

POL 338 Politics of Eastern Europe

Political development, national integration, political culture, government institutions and patterns of administration of the countries of East Central and South Eastern Europe.
Prereq.: POL 101 3 Cr. Even Fall

Student Learning Outcomes

1. Review the common political history of the countries of East Central and South Eastern Europe.
2. Examine the different cases of political transition from Eastern Europe.
3. Assess the relative successes and failures from cases of political and economic transition in Eastern Europe.
4. Distinguish between the competing historical, structural, and cultural factors that influence the cases of political transformation found in Eastern Europe.

POL 339 Canadian Government and Politics

The government of Canada: its political structure, theories of politics, and political culture. Comparison with similar institutions, theories, and culture in the U.S. Special attention will be focused on the operation of the respective federal systems.
Prereq.: POL 111 3 Cr. Even Spring

POL 351 U.S. Foreign Policy

The formulation of U.S. foreign policy. Trends in foreign policy and the effects these decisions have on domestic politics.
3 Cr. Spring

Student Learning Outcomes

1. Point out the historical reasons behind isolationist trends in U.S. foreign policy.
2. Explain the containment rationale behind American foreign policy during the Cold War.
3. Identify the challenges facing U.S. foreign policy in a wireless globalized post 9/11 World.

POL 353 Theories of International Politics

Theories and research methods relating to international politics and behavior. Major theoretical themes in current research and scholarship.
Prereq.: POL 251 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify key concepts in international politics.
2. Evaluate the major theoretical approaches in international politics.
3. Use the major theoretical approaches in international politics to analyze contemporary debates and issues.
4. Demonstrate knowledge of the major trends in international politics theory.

POL 354 International Organizations

Examines the role of international organizations in world affairs.
Prereq.: POL 251 3 Cr. DEMAND

Student Learning Outcomes

1. Explain the emergence and functioning of IOs.
2. Discuss and explain The League of Nations and the Inter-War Period (i.e. 1918-1939) 3. Discuss and explain the UN and Post-World War II diplomacy.
4. Discuss and explain theories relating to IOs.
5. Discuss and explain the interaction between IOs, regional organizations, TNCs, and NGOs.
6. Explain the impact of global financial institutions (World Bank, IMF) on states in the developing world.

POL 355 International Security

Issues and theories relating to international security, the causes of war, the evolution of rules and norms regarding the use of force, theories relating to the resolution and prevention of conflicts, deterrence theory, and the security predicament in the third world.
Prereq.: POL 251 3 Cr. Spring

Student Learning Outcomes
1. Describe and explain the general theories relating to international security.
2. Describe and explain the general theories and explanations for the causes of international wars and conflicts.
3. Discuss the evolution of the norms concerning the use of force as well as the evolution of rules and norms for the conduct of war.
4. Describe and explain the theories and strategies for conflict prevention and resolution (deterrence theory, the role of international institutions in conflict prevention and resolution, peacekeeping operations).
5. Describe and explain new and emerging security issues that now confront the international community.

POL 361 Western Political Thought

Evolution of western political thought with a particular emphasis on the modern liberal-conservative mainstream and on the attacks on this mainstream from the left and right extremes.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Correctly identify the major schools and themes of western political theory.
2. Critically analyze the conclusions of western political philosophers by contrasting those arguments with the philosopher's relative historical context.
3. Identify different forms of philosophical reasoning by comparing different historical philosophies of politics.
4. Distinguish between the initial assumptions of various philosophers and the conclusions reached in an analysis of philosophical arguments about politics.
5. Create a critical argument that supports why some arguments are more convincing than others by comparison of different philosophical arguments about politics.
6. Explain the historical and philosophical development of democracy.

POL 362 Contemporary Political Thought

Survey of current debates and research in contemporary political theory. Emphasis on analyzing ongoing political debates from a broader theoretical perspective.
3 Cr. DEMAND

Student Learning Outcomes
1. Describe and explain the relationship between contemporary political theory and other areas of the political science discipline.
2. Explain how political theory is a tool to evaluate political issues and demonstrate how this is accomplished through discussion and writing.
3. Explain in a broader perspective on where politics occur in contemporary societies.
4. Identify and describe representative works and authors from different areas of Contemporary Political Theory.

POL 380 Public Administration

Introduction to administrative processes with special emphasis on the political role and setting of public agencies.
Prereq.: POL 111 3 Cr. Fall

Student Learning Outcomes
1. Evaluate the policy process in relation to its impacts and outcomes.
2. Differentiate between public and private sector administrative theories.
3. Examine theoretical foundations in public sector substantive areas.
4. Synthesize a critical analysis of a substantive issue integrated with public administration theories.
5. Identify core functions of public administration.

POL 391 Introduction to Law

Origin and structure of the American legal system, including the legal profession (courts, judges, juries, attorneys), civil and criminal law, and alternative dispute resolution.
3 Cr. Odd Spring

Student Learning Outcomes
1. Distinguish between public and private law, civil and criminal law, and statutory and common law.
2. Appraise the role of all participants in the legal system, including judges, attorneys, juries, parties, and experts.
3. Compare and contrast the American approach to dispute resolution to that of at least three other democracies.

4. Write persuasive analyses of current controversial legal issues.

POL 411 The Presidency

Presidential selection, the leadership role of the presidency, legislative involvement, relations with the media and the American public, the president as party leader and relationships between members of the executive branch.
Prereq.: POL 111 3 Cr. Fall

Student Learning Outcomes

1. Describe the rich history of the office of the presidency and of particular presidents.
2. Analyze the constitutional and legal changes (both formal and informal) in the bases of power of the American Presidency.
3. Evaluate how modern powers or roles of the presidency are carried out.
4. Analyze how presidential elections are carried out.

POL 412 Legislative Process

Legislative functions, elections, process, influence on decision making and problems.
Prereq.: POL 111 3 Cr. Odd Spring

Student Learning Outcomes

1. Demonstrate knowledge of the American legislative process through written papers, essay exams and class discussion.
2. Identify members and the positions they hold in the US legislature and demonstrate how the members/positions contribute to the decision making processes. ive process; its members, structures, procedures, and functions.
3. Analyze the American legislative, structures, procedures, and functions and how they contribute to decision making.
4. Use the US legislature as a comparative base for analyzing state legislative processes.

POL 413 Judicial Process

The structure, process and personnel of American courts with particular emphasis on the role of the US Supreme Court in the American political system.
Prereq.: POL 111 3 Cr. Even Spring

Student Learning Outcomes

1. Demonstrate their knowledge of the nature of the judicial process and some of the many variables that account for the behavior by judges and courts as they resolve disputes and allocate values within our federal and state systems.
2. Apply knowledge of law schools, legal profession, legal practice, courts (trial and appellate, state and federal), and those persons, groups, and institutions that are impacted by the courts.
3. Analyze, via political variables, how the legal process functions as part of the political system to affect who gets what in society.
4. "Use the reality of the legal process operation, not ""official theory"" of how the legal process generally and courts specifically, are supposed to work."

POL 420 Senior Project

Research and writing in discipline for majors in Political Science or International Relations. Fulfills the UDWR in conjunction with the work in a concurrently enrolled course.
Coreq.: Any 400-level POL course 1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Discuss the whole of their Political Science or International Relations learning experience.
2. Analyze the inter-connections among the individual courses.
3. Identify and discuss the methodologies employed by political science reasearchers.
4. Describe their project in written and oral communication form.

POL 434 Politics of the Arab Peninsula [Goal 8] (Diversity)

Politics of traditionalism and change in the Arab Peninsula. The strategic and long standing relation between the Arab Peninsula countries and the United States.
3 Cr. Fall GOAL AREA 8: GLOBAL PERSPECTIVES

POL 436 Southeast Asian Governments and Politics (Diversity)

Southeast Asian governmental institutions, their political processes, and recent political and economic trajectories that form the prospects of democratization in some countries and democratic consolidation in others.
3 Cr. Even Fall GOAL AREA 8: GLOBAL PERSPECTIVES

POL 440 Special Topics

Lecture, readings, research and discussions on selected topics. May be repeated with different topics to a maximum of 12 credits. 3 Cr. DEMAND.
3 Cr. DEMAND

POL 444 Internship

Supervised research and training opportunities provided by government agencies or political groups. Maximum of 9 credits toward major and 3 credits toward minor. Public administration majors must take 9 credits. Public Administration majors (BA) will meet the University Upper Division Writing Requirement in this course by completing a portfolio of work, a single written paper or through multiple papers.
Coreq.: 3-9 Cr. Fall | Spring | Summer

POL 451 International Law

Survey of the development and contemporary application of rules and principles of international law: maritime laws, ocean resources, space, and peaceful settlement of disputes between states.
Prereq.: POL 251 3 Cr. Fall

Student Learning Outcomes

1. Develop analytical reasoning skills by applying international legal theory to hypothetical cases.
2. Demonstrate the ability to write coherently and consistently on topics in international law.
3. Understand the scope and sources of Public International Law.
4. Analyze the use of force and the dilemmas it presents within the context of international law.
5. Understand the problems and range of state sovereignty in the areas of human rights, the use of force and humanitarian intervention, extraterritorial jurisdiction, and state recognition.

POL 452 United Nations and Regional Organization

Organization, authority, achievements and problems of the United Nations and its auxiliary components.
Prereq.: POL 251 3 Cr. Fall | Spring | Summer

POL 453 Global Environmental Politics and Policies

Impact of global environmental politics and policies on the developing world in the era of contemporary globalization.
3 Cr. Odd Fall GOAL AREA 10: ENVIRONMENTAL ISSUES

POL 454 The Politics of the Global Economy

Interaction of nation-state and international economy explored through contending philosophies, approaches and theories (e.g. neo-realism, rational choice theory, dependency).
Prereq.: POL 251 3 Cr. Fall

Student Learning Outcomes

1. Identify the similarities and differences between the major theoretical schools of thought in International Political Economy.
2. Explain the causes of the 2008 global economic crisis.
3. Evaluate the issues surrounding Moral Hazard that emerges from economic bailouts of entities deemed Too-Big-To-Fail.

POL 456 Terrorism, Insurgency, and World Politcs

The evolution of conflict in the post Cold War; terrorist and insurgent motivations; organizations; tactics; strategies; impact of globalization on terrorism and insurgency; the response of governments and international community.
Prereq.: POL 251 3 Cr. Spring

Student Learning Outcomes

1. Identify and describe the theories that explain terrorist and insurgent motivations and tactics.
2. Describe and discuss a broadened perspective on international affairs, particularly the dynamics of post Cold War conflicts in the global south (wars of the third kind).
3. Describe and explain post Cold War security dilemmas and the global response to current security problems.
4. Explain the politics of weak and failed states and the role that they play in post Cold War conflicts.

POL 457 Spies and Espionage

Structure and function of the intelligence apparatus in the United States with focus on the way the intelligence process contributes to foreign policy and national security decision making.
3 Cr. Even Spring

Student Learning Outcomes

1. Identify what information constitutes intelligence and the process that transforms plain information into intelligence.
2. Examine the history and development of intelligence gathering in the U.S.
3. Identify the different phases of the intelligence cycle.
4. Examine and critique the various ways of analyzing the structure of the intelligence community in the U.S. (organizational view, functional view, budgetary view).
5. Identify the various stake holders in the intelligence process (the President, different Cabinet Departments, National Security Council, Congress)

and evaluate how intelligence fits in the bigger picture of national security and foreign policy.
6. Assess the different intelligence disciplines involved in intelligence gathering.
7. Analyze how oversight is exercised over the various intelligence organizations.
8. Examine how certain practices in the intelligence process can sometimes raise ethical dilemmas.
9. Identify and critique the major changes brought about by intelligence reform post 9/11.

POL 458 Global Disaster Relief Policy

International community's response to relief needs. Roles of intergovernment organizations (UN, WHO) and NGOs: administration, funding sources and their impact on efficacy.
3 Cr. Spring

Student Learning Outcomes

1. Analyze how political, economic, and cultural elements are involved in disaster relief.
2. Analyze specific international issues and propose and evaluate responses.
3. Identify appropriate immediate responses to natural and man-mad disasters.
4. Synthesize an appropriate and individualized response to disasters.
5. Implement a disaster relief program within 24 hours of a mock disaster.

POL 463 American Political and Legal Thought

The philosophy and theories which underlie the American system of democratic government.
Prereq.: POL 195 3 Cr. Even Spring

Student Learning Outcomes

1. Explain the historical foundations of America, focusing on its social, legal, and political inheritances from Great Britain and from Christianity.
2. Identify and assess the various views of human nature offered by philosophers commenting on the American experience.
3. Analyze critically the rights and responsibilities of American democratic government from the Founding to the present.
4. Explain the relationship between capitalism and American democracy from the Founding to the present; analyze how the American political and legal systems have addressed underlying problems in its economic system.
5. Explain historical views of America's role in the world. Synthesize these to offer a view of its role for the 21st century.

POL 465 Modern Ideologies

Fascism, communism and ideas which have contributed to democratic thought.
3 Cr. Fall

Student Learning Outcomes

1. Review the common historical, cultural, and social characteristics associated with political ideologies of the modern period.
2. Analyze the similarities and differences between ideologies of the 19th, 20th, and 21st century.
3. Assess the relative historical success of various political ideologies.
4. Formulate a description of their own political ideology.
5. Judge the compatibility of various political ideologies with the practice of democracy.

POL 466 Health Policies and Regulations

Policy processes and outcomes. LTC regulatory policies and their impact on SNF administration.
3 Cr. DEMAND

POL 470 Public Opinion and Electoral Behavior

Nature of public opinion and major influences on it. Elections, parties, measurement, and impact.
Prereq.: POL 111 3 Cr. DEMAND

Student Learning Outcomes

1. Demonstrate knowledge of the nature of public opinion in contemporary American politics and how to conceptualize and measure public opinion, where opinions or attitudes 'come from,' how people arrived at a vote choice on Election Day, and whether public opinion affects policymaking.
2. Demonstrate how to obtain public opinions through survey research by conducting, including sampling and questionnaire design, and how to interpret their results.
3. Analyze political science theories of how people form opinions and translate opinions into answers to survey questions.
4. Demonstrate knowledge of how public opinions are learned (sociological, psychology, etc.) and whether their are group differences in opinions (race, age, gender, religion, gender, region, etc.) regarding public opinions.
5. Use your knowledge of public opinions to reflect on debates about the 'competence' of the public and how much public opinion does (and should) affect public policy.

POL 481 Administering Public Policy

Study of the initiation, content, administration and impact of selected contemporary domestic government policies: transportation, consumerism, environment, poverty.
3 Cr. Spring

Student Learning Outcomes
1. Evaluate impacts of substantive responses to policy issues.
2. Compare alternative policies created to address specific socio-economic issues.
3. Compose and innovative method to acquire external funds for implementation of a public policy.
4. Identify potential solutions to domestic policy dilemmas.

POL 482 Public Personnel Administration
Examines personnel management in the public sector including recruitment, employee rights, collective bargaining, affirmative action and employee conduct.
3 Cr. Spring

Student Learning Outcomes
1. Identify the theory, practice and dynamics of public personnel management in America.
2. Apply theories and tools of planning for human resource needs, job analysis and classification and evaluation, and compensation.
3. Identify and apply policies regarding equity, recruitment, selection and promotion in relation to human resource procurement.
4. Analyze the development of human resources: productivity, employee motivation, training and development, and workplace safety.
5. Identify issues and problems regarding sanction in the public workplace: employee rights, disciplinary action and grievances, and labor-management relations.

POL 483 Managing Local Governments
Practical problems of local administration including grant applications, personnel, budgeting, public works and local renewal.
Prereq.: POL 312, POL 313 3 Cr. DEMAND

Student Learning Outcomes
1. Identify four fundamental themes of urban management.
2. Apply these themes to understand the environment of urban management, institutional management, internal management process, and future urban management.
3. Identify important issues, such as fiscal stress, budgeting, and race, that have been and will be impacted municipal governments throughout the US.

POL 484 Public Budgeting
Budgeting in public agencies. Emphasis on budget preparation, budget politics, capital budgets, debt administration. Practical applications of budget making.
3 Cr. Fall

Student Learning Outcomes
1. Analyze several theories of public budgets.
2. Apply these theories to understand the interface between politics and public budgeting at all levels of governments.
3. Identify major streams of politics and public budgeting in revenue politics, the politics of budgetary process, the politics of capital budgeting, and so forth.
4. Analyze the differences between public and private budgeting.

POL 485 Administrative Law
Legal problems arising from use of administrative agencies; administrative procedure; judicial relief against administrative action.
Prereq.: POL 111 3 Cr. DEMAND

Student Learning Outcomes
1. Appraise the role of various participants in the creation of regulatory law, including Congress and congressional committees; executive agencies, interest groups, lawyers, and the judiciary.
2. Explain how policy is made at the federal level after the passage of congressional legislation; identify the obstacles to successful policy creation and implementation.
3. Identify the reasons why policy creation and implementation in America relies so heavily on legalistic processes, including but not limited to lawsuits.
4. Propose alternative approaches to policy making that are less adversarial in nature and less reliant on courts.

POL 487 Administration of the Nonprofit Organization
Examines philosophical underpinnings, concepts and principles of nonprofit organizations, emphasizing history, philosophical foundations, and influence of

government policies and internal governance.
3 Cr. DEMAND

Student Learning Outcomes
1. Describe the values and history of the nonprofit sector.
2. Evaluate the theories-economic, political, social, organization and giving that form the philosophical basis of the nonprofit field.
3. Describe governance issues and the legal and policy framework for management of the voluntary enterprise.
4. Identify and apply managerial practices: leadership and planning, general fundraising, commercialism and contracts, and budgeting and managerial controls to the operations of the nonprofit organization.

POl 488 Health Administration
Prepares students for extended care facility administrator's licensure exam. Covers laws, regulations, guidelines, regulatory management, nursing facility services, multicultural diversity in elderly care.
3 Cr. DEMAND

POL 489 Public Management
Analysis of advanced public management techniques. Problems of implementing techniques. Practical case problem solving and class participation stressed. Limited enrollment.
3 Cr. Spring

Student Learning Outcomes
1. Analyze the general nature of bureaucracy and how it structures organizational behaviors.
2. Identify and apply necessary competencies (aka: skills) to be competent public services to management problems and issues.
3. Describe and apply principles of organizational culture to organizational behaviors.
4. Describe performance assessment and apply measures of performance to common organizational, program and subprogram problems and issues.
5. Identify and apply theories of leadership to common public organizational problems.

POL 491 Constitutional Law
Supreme Court's historical and current influence on American law and policy, focusing on the Commerce Clause and the 14th Amendment.
3 Cr. Fall

Student Learning Outcomes
1. Analyze the Supreme Court's use of judicial review and stare decisis by comparing its historical approach to its current approach.
2. Evaluate the Supreme Court's ability to effect social change by identifying the factors that contribute to its successes and failures.
3. Assess the strengths and weaknesses of justices' reasoning and argumentation across a variety of legal cases.
4. Take and defend legal positions by participating in oral arguments and by writing persuasive essays on controversial cases.

POL 492 The Courts and Civil Rights
Supreme Court decisions concerning individual rights and liberties, particularly those found in the First Amendment. Supreme Court decisions concerning discrimination, speech, religion, search and seizure, counsel and other individual rights.
3 Cr. Spring

Student Learning Outcomes
1. Assess the Supreme Court's role in creating First Amendment law, focusing on the religion clauses and the free speech clause.
2. Argue both (all) sides of controversial civil rights issues equally well through oral arguments and written assignments.
3. Differentiate between constitutional and unconstitutional restrictions on civil rights, and particularly on the free exercise of religion and the freedom of speech.
4. Assess the strengths and weaknesses of justices' opinion across a variety of civil rights cases.

Psychology (PSY)

PSY 115 Introduction to Psychology
Survey of contemporary scientific psychology. Includes: biological bases of behavior, cognitive mechanisms, learning/behavioral adaptation, development, social influences, personality, disorders, and treatment.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

Student Learning Outcomes
1. Describe or use the methods and data by which historians, social scientists, or behavioral scientists investigate human conditions.
2. Analyze human behavior, cultures, and social institutions and processes from the perspectives of

history or the social and behavioral sciences.
3. Develop explanations for and explore solutions to historical or contemporary social problems.
4. Reflect upon themselves in relation to family, communities, society, culture, and/or their histories.

PSY 119 Psychology as a Discipline and Profession

Explore academic and career options in psychology. Develop relevant personal, academic and career goals. Intended majors only.
Prereq.: PSY 115 1 Cr. Fall | Spring

Student Learning Outcomes

1. Apply knowledge of psychology (e.g. decision strategies, life span processes, psychological assessment, and types of psychological careers) to formulating career choices.
2. Identify the types of academic experience and performance in psychology and the liberal arts that will facilitate entry into the work force, post-baccalaureate education, or both.
3. Describe preferred career paths in psychology based on accurate self-assessment of abilities, achievement, motivation, and work habits.
4. Identify and develop skills and experiences relevant to achieving selected psychology career goals.
5. Articulate importance of lifelong learning and personal flexibility to sustain personal and professional development in the field of psychology and related career areas.

PSY 200 Psychological Data Analysis Lab

Use of empirical data to analyze outcomes of psychological studies: experimental and non-experimental. Work with existing psychological databases.
Prereq.: MATH 112 or higher (numerically) Coreq.: PSY 201 1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Manipulate and organize real-world psychological data to conform to necessary analytical structure.
2. Select analytical techniques based on the scale properties of psychological variables.
3. Apply analytical techniques appropriate to the research design of psychological studies.
4. Analyze and interpret data from psychology studies using appropriate statistical strategies.

PSY 201 Psychology Statistics

Descriptive and inferential statistics. Sampling procedures, data analysis, probability, estimation, statistical decision making. Parametric and non-parametric approaches.
Prereq.: PSY 115, MATH 112 or higher, psychology major or instructor's permission Coreq.: PSY 200
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Select and use appropriate descriptive and inferential statistics, including frequency distributions, measures of central tendency and variability, z-scores and the normal distribution, t-tests, analysis of variance, correlation, and chi-square.
2. Interpret statistical results correctly.
3. Compare and contrast the strengths and weaknesses of various statistics/analyses.
4. Choose the appropriate statistic for various experimental designs.

PSY 202 Methodology in Psychology

Experimental and descriptive research design and methodology.
Prereq.: PSY 115, PSY 200, PSY 201 or permission 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Analyze psychological research and differentiate between methodologically sound and flawed studies.
2. Compare and contrast different research methods (experimental and nonexperimental) and evaluate their strengths and limitations.
3. Apply the American Psychological Association code of ethics associated with conducting psychological research to various hypotheses.
4. Critically evaluate psychology journal articles.

PSY 225 Psychology of Women (Diversity)

Psychological research, theories and issues relevant to women. Critical analysis of similarities and differences between women and men.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

Student Learning Outcomes

1. Describe or use the methods and data by which historians, social scientists, or behavioral scientists investigate human conditions.
2. Analyze human behavior, cultures, and social institutions and processes from the perspectives of history or the social and behavioral sciences.
3. Develop explanations for and explore solutions to historical or contemporary social problems.

4. Reflect upon themselves in relation to family, communities, society, culture, and/or their histories.
5. Demonstrate awareness and understanding of historical and current race relations in the United States.
6. Analyze current events and conditions at the local, statewide, and national levels using course theories and concepts.
7. Identify forms of institutional discrimination in areas such as education, media, housing, employment, economics, politics, and the legal system.
8. Describe the basic history of discrimination against and contributions of African Americans, Asian Americans, American Indians, Latinos, and recent immigrants of color.
9. Engage in dialog and self-reflection concerning racism, racial oppression, white privilege and male privilege.

PSY 228 Conservation Psychology

Psychological aspects of conservation and sustainability in the context of environmental, ecological, evolutionary and cross-cultural perspectives including attitudes, values, risk perception, environmental identity, human-nature interactions, behavioral interventions.
3 Cr. Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 10: ENVIRONMENTAL ISSUES

Student Learning Outcomes

1. Apply the concepts of sustainability and sustainable development, as linked to individual lifestyle choices (housing, transportation, etc.) and day-to-day behaviors (e.g., energy, water use).
2. Connect the urban ecosystem (plants, animals, and ecosystem services, etc.) and the place of humans within the system.
3. Analyze the psychological benefits of human contact with animals and plants and explain the marked preference that humans have for environments containing natural elements, and savanna-like settings as an evolved adaptation (i.e. biophilia).
4. Describe the categories, patterns and challenges of human contact with the natural world: domestic nature (e.g., pets, gardens), managed nature (e.g., zoos, parks,urban green spaces, community gardens, healing gardens), and wilderness areas.
5. Apply basic psychological theories and concepts related to risk perceptions, environmental values, attitudes, and attitude and behavior change (e.g. bounded rationality, values-belief-norm model, elaboration likelihood model).
6. Describe the connections between environmental identity, pro-environmental attitudes and environmentally sustainable behavior using a psychological perspective.
7. Create a behavioral intervention (e.g., design of physical affordances for conservation behaviors, persuasive messages and advertisements, simulations, informational feedback) for the promotion of sustainable behaviors.
8. Demonstrate critical thinking, from a psychological disciplinary viewpoint (e.g. the psychology of cooperation and conflict) about issues of sustainability and conservation on both a local and international scale (case histories of sustainable and unsustainable practices).

PSY 240 Developmental Psychology

Human development from a life span perspective, including multicultural, theoretical, and research perspectives. Careers in developmental psychology.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

Student Learning Outcomes

1. Describe or use the methods and data by which historians, social scientists, or behavioral scientists investigate human conditions.
2. Analyze human behavior, cultures, and social institutions and processes from the perspectives of history or the social and behavioral sciences.
3. Develop explanations for and explore solutions to historical or contemporary social problems.
4. Reflect upon themselves in relation to family, communities, society, culture, and/or their histories.

PSY 250 Cognitive Psychology

Attention and consciousness, memory, thinking, problem solving, perception and cognitive development.
Prereq.: PSY 115 3 Cr. Fall | Summer

Student Learning Outcomes

1. Explain the major theories and paradigms in cognitive psychology.
2. Recognize and describe basic research methods in cognitive psychology including research design, data analysis, and interpretation.
3. Participate in cognitive psychology demonstrations and experiments.
4. Use appropriate terminology and procedures to write brief lab reports based on demonstrations and

experiments.
5. Evaluate personal, educational, social, or organizational issues using the principles of cognitive psychology.

PSY 270 Social Psychology

Attitudes, social cognition, attraction, aggression, altruism, prejudice, intimate relationships, the self, and group dynamics.
Prereq.: PSY 115 3 Cr. Spring | Summer

Student Learning Outcomes
1. Compare and contrast the main theoretical and methodological approaches of social psychology.
2. Critically evaluate research in social psychology.
3. Apply social psychology to their own lives and to current events.

PSY 282 Human Learning and Memory

Classical and operant conditioning, verbal learning, and memory processes.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze the factors that influence learning.
2. Compare and contrast the major principles of learning.
3. Apply major principles and research findings of learning to improve daily life.
4. Use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to learning and in daily life in general.

PSY 323 Environmental Psychology

The environment, use of space, stressors and esthetics as related to human beings, the optimum design of buildings, homes, and institutions, and the effect of humans on the natural environment.
3 Cr. Fall

Student Learning Outcomes
1. Examine the impact of the built environment (at both a smaller-scale and larger-scale level) on human spatial behavior.
2. Evaluate the impact of environmental stressors (e.g., noise, physical contamination) on behavior, psychological well-being, and health.
3. Differentiate between human behavior in optimal and sub-optimal environments of various types (e.g., residential, work, recreational).

PSY 325 Psychology and Modern Life

The impact of modern thought on individuals and society, especially on the family, religion, education, business, and government.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Explain the psychological influence of modern thinking about families, religion, education, and government on their own lives.
2. Using historical comparisons, illustrate how modern thought has changed individuals' psychological conceptions of their role(s) in society.
3. Debate whether humans are psychologically better or worse off as a result of modern conceptions of the person and/or society.

PSY 327 Motivation and Emotion

Biological, learned, and cognitive components of motivated behavior and emotional responses.
Prereq.: PSY 115 3 Cr. Fall

Student Learning Outcomes
1. Evaluate the main theoretical psychological approaches and current research in motivation and emotion.
2. Apply motivation or emotion research to either their own life experiences or to current events.
3. Evaluate an original research article in psychology on the topic of motivation or emotion.

PSY 329 Psychology of Sleeping and Dreaming

Psychological, physiological and biochemical aspects of sleeping and dreaming; treatments of sleep disorders; theories of dream interpretation.
3 Cr. DEMAND

Student Learning Outcomes
1. Evaluate the biological and psychological functIons of sleep.
2. Compare and contrast the functions of REM and the four stages within NREM sleep.
3. Differentiate between various sleep disorders.
4. Evaluate modern theories of how and why dreaming occurs.
5. Analyze personal sleep habits to fully understand the importance of sleep for psychological functioning.

PSY 330 Cross-Cultural Psychology

Exploration of issues influencing individuals and groups in cross-cultural and multicultural contexts. Cultural influences on perception, cognition, emotions, behavior, attitudes, and human

development.
Prereq.: PSY 115 3 Cr. DEMAND

Student Learning Outcomes
1. Outline the major issues, theories, and research findings related to how culture influences groups and individuals and will be able to describe the predominant research methods in cross-cultural research.
2. Understand and become well-versed in a cross-cultural psychology topic by writing a literature review.
3. Relate aspects of the topic to aspects of personal experience in a multicultural society and/or traveling/living abroad.
4. Understand the impacts of culture on human behavior.
5. Demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in cross-culture psychology for the Theory and Content of Psychology Section.
6. Understand and apply basic research methods in psychology, including research design, data analysis, and interpretation in the Research Methods in Psychology section.
7. Respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes in the Critical Thinking Skills in Psychology section.
8. Recognize, understand, and respect the complexity of sociocultural and international diversity in the Sociocultural and International Awareness section.
9. Understand and apply psychological principles to personal, social, and organizational issues in cross-cultural psychology in the Application of Psychology section.
10. Communicate effectively in a variety of formats in the Communication Skills section.

PSY 345 Psychology of Death and Dying

Psychological research and theory concerning death and dying rituals and practice. Multicultural rituals and practices.
3 Cr. Spring | Summer

Student Learning Outcomes
1. Apply a broad psychological background of theoretical and methodological approaches to compare death and dying processes (e.g., expression of grieving).
2. Integrate global awareness into issues of death and dying and compare how grieving and mourning is practiced in diverse ways and diverse cultures (e.g., rituals in various countries).
3. Examine death and dying from a life span psychological perspective (e.g., death of a child).

PSY 353 Sensation and Perception

Sight, hearing, smell, taste, and touch. Classical psychophysics and signal detection theory.
Prereq.: PSY 115 3 Cr. Fall

Student Learning Outcomes
1. Specify the structure and functions of the sense organs.
2. Evaluate the relationship between physical sensations and psychological experiences (psychophysics).
3. Compare and contrast major theories of sensation and perception.
4. Reflect on the impact of variations in sensation and perception (e.g., color blindness) on a person's life.

PSY 355 Psychology of Problem Solving and Decision Making

Theoretical models, heuristics, and biases. Applications.
Prereq.: PSY 115 3 Cr. Spring

Student Learning Outcomes
1. Examine various theoretical psychological perspectives regarding decision making and problem solving.
2. Critically analyze decision-making heuristics within case studies.
3. Apply problem solving techniques.

PSY 360 Industrial Psychology

Psychological study of people and the world of work.
3 Cr. Spring

Student Learning Outcomes
1. Apply the basic principles of industrial psychology to personnel and human resources management within organizations.
2. Analyze how individual career choices and work-life success can be improved through the application of industrial psychology.
3. Analyze decision-making and management decisions using an objective and quantitative psychological perspective.

PSY 375 Psychology of Altruism, Helping, and Holocaust Rescue

Definitions and theories of altruism and helping. Topics of altruistic personality, situational determinants, racism/ethnocentrism, emotions, social norms, genetics, development, help seeking, and responses to aid. Case histories of helping, and altruistic behavior during the Holocaust of World War II.
Prereq.: PSY 115 3 Cr. Fall

Student Learning Outcomes

1. Differentiate among various psychological motivations for helping behavior.
2. Examine the life and actions of an individual Holocaust rescuer and conduct a psychological motivational analysis.
3. Analyze the impact of anti-Semitism on the motivations and behaviors of rescuers and bystanders.

PSY 378 Theories of Personality

Personality theories and methods for assessing personality. Relations between personality theories and other major areas in psychology.
Prereq.: PSY 115 3 Cr. Fall

Student Learning Outcomes

1. Critique different types of research methodologies used to assess personality.
2. Apply personality theories to describe, explain, and predict the behavior of a given person.
3. Evaluate ways in which human diversity and cultural issues (e.g., gender, ethnicity, etc.) have been addressed in the psychological study of personality.

PSY 380 Experimental Psychology

Experiments in psychology; collection, manipulation, and report of data.
Prereq.: PSY 115, PSY 200, PSY 201, PSY 202 or permission 3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze and critique primary sources (empirical articles) describing psychological research.
2. Propose and conduct empirical research to investigate a psychological topic.
3. Apply the ethical guidelines of the American Psychological Association (APA) when conducting psychological research.
4. Create a written research report on a psychological study that follows the APA manuscript guidelines.

PSY 386 Physiological Psychology

Physiological and biochemical correlates of such phenomena as arousal, emotion, motivation, learning, and memory.
Prereq.: BIOL 104, PSY 115 3 Cr. Spring

Student Learning Outcomes

1. Categorize the underlying physiological structures in humans that are responsible for psychological functions.
2. Evaluate the relationship between physical well-being and psychological well-being.
3. Use case studies to illustrate the impact of biological structures and systems (e.g., the split brain) on human behavior and thought.

PSY 401 Field Experience

Arrangement to be made with supervising professor and field institution supervisor. May be internship, practical experience, volunteer work, etc.
Prereq.: PSY 115, PSY 116, PSY 201, PSY 202 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply psychology theories in a community setting.
2. Synthesize published material in a written review of the literature paper.
3. Analyze their internship experience through self-reflection.

PSY 425 Psychology of Creativity

Creativity from the perspective of social, cognitive, transpersonal, organizational, and neurological psychology. Assessment and development of creativity.
Prereq.: PSY 115 or permission of instructor 3 Cr. Spring

Student Learning Outcomes

1. Evaluate creative ability using psychological tests of creative thinking.
2. Apply the concepts of fluency, flexibility, originality, and elaboration.
3. Analyze creative personality using psychological assessments.

PSY 426 Topical: Seminar in Psychology

Topics in psychology, including an in-depth exploration with readings and discussion.
Prereq.: PSY 115 3 Cr. DEMAND

Student Learning Outcomes
1. Perform a literature search.
2. Analyze information from primary sources.
3. Evaluate the quality of information available within a topic domain and be able to perform a critical analysis of research methodologies within a domain.
4. Apply theoretical frameworks to a topic area.
5. Compare and contrast theories.
6. Synthesize information from a variety of sources by performing a literature review.
7. Use verbal skills of scholarly discourse.
8. Apply knowledge of research and theory to real-world problems.

PSY 428 Psychology Teaching Practicum

Training and practical experience in applying instructional and peer advising techniques in educational settings. Course may be repeated for a total of 6 credits. Instructor's permission required.
Prereq.: PSY 115 or instructor permission Coreq.: 1-3 Cr. Fall | Spring

Student Learning Outcomes
1. Specify how they used their own undergraduate learning experiences to help the students with whom they interacted as a teaching assistant or peer adviser.
2. Evaluate how their experience as a teaching assistant or peer adviser added to their understanding of the field of psychology, as an academic discipline and/or as a profession.
3. Appraise how their understanding of college-level learning has changed as a result of providing feedback on students' assignments.

PSY 429 History/Systems of Psychology

The origin and development of current ideas in psychology.
3 Cr. Spring

Student Learning Outcomes
1. Evaluate philosophies of science (e.g., Popper, Kuhn, Foucault) applicable to the field of psychology.
2. Describe early historical trends related to the development of the field of psychology (e.g. the philosophy of the Ancient Greeks).
3. Compare and contrast systems and paradigms in the history of psychology (e.g., gestalt psychology, behaviorism).
4. Critically analyze and synthesize information related to a topic/person in the history of psychology.

PSY 430 Advanced Topics

In-depth exploration of selected topics in psychology such as social cognition, cognitive neuropsychology, new models of intelligence testing, psychobiographical analysis, climate for creativity in organizations, etc.
Prereq.: PSY 115, PSY 116, PSY 201, PSY 202 3 Cr. Fall | Spring

Student Learning Outcomes
1. Evaluate the main theoretical psychological approaches and current research findings in the advanced topic theme.
2. Evaluate original research articles in the advanced topic theme.
3. Synthesize the literature into a cumulative paper in the advanced topic theme.
4. Present current psychological research in the advanced topic theme.

PSY 432 Research Topics in Psychology

Literature reviews, research design, data collection, and reporting for research in psychology. May be repeated with different topics up to 6 credits.
Prereq.: PSY 115, PSY 116, PSY 201, PSY 202 3 Cr. Fall | Spring

Student Learning Outcomes
1. Complete a comprehensive empirical study from establishing a theoretical psychological framework to presenting results.
2. Design data collection materials, collect empirical data, and analyze research data using appropriate statistical tests.
3. Apply knowledge of the guidelines for ethical treatment of research participants.
4. Present empirical research results following the manuscript guidelines set forth in the Publication Manual of the American Psychological Association.

PSY 435 Readings in Psychology: Classic and Contemporary

Integrative review of the major areas of psychology using classic and contemporary primary sources.
3 Cr. DEMAND

Student Learning Outcomes

1. Compare and contrast classic and contemporary psychological theories of behavior and thought.
2. Integrate different theoretical psychological perspectives on a topic.
3. Produce an APA Style literature review on a psychological topic, following historical developments in the treatment of that topic in psychology.
4. Apply knowledge of psychology (e.g., decision strategies, life span processes, psychological assessment, and types of psychological careers) to formulating career choices.

PSY 441 Child Psychology

Study of childhood, current research, theory, and development of children in various cultures.
Prereq.: PSY 115 or equivalent 3 Cr. Fall

Student Learning Outcomes

1. Appraise and evaluate basic psychological concepts, research, and theories about child development in various cultures.
2. Summarize available resources for prenatal care and examine cultural differences in outcomes (e.g., impact on infant mortality rate).
3. Debate and criticize clashing psychological concepts and views of child development (e.g., corporeal punishment).

PSY 442 Psychology of Adolescence

Study of adolescence: current research, theory, and development of adolescents in various cultures.
Prereq.: PSY 115 or equivalent 3 Cr. Spring

Student Learning Outcomes

1. Appraise and evaluate basic psychological concepts, research, and theories about psychology of adolescence in various cultures.
2. Analyze and integrate theories of adolescent development within a class project (e.g., ,book report, research, term paper, or integrated with volunteer hours).
3. Translate theory and research in psychology of adolescence into social policy issues and questions (e.g., sex education).

PSY 443 Psychology of Adult Development and Aging

Study of adulthood and aging, current research, theory, and development of adults in various cultures.
Prereq.: PSY 115 or equivalent 3 Cr. Spring

Student Learning Outcomes

1. Appraise and evaluate basic psychological concepts, research, and theories about psychology of adult development and aging in various cultures.
2. Construct adult life as an ongoing developmental process (e.g., socioemotional selectivity theory).
3. Review and synthesize psychological literature on a relevant topic concerning adult development and aging (e.g., APA style paper on Impact of Early Resilience on Aging).

PSY 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for the further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

PSY 460 Organizational Psychology

Theory and research of organizational behavior. Leadership, culture, work motivation, and job satisfaction.
3 Cr. DEMAND

Student Learning Outcomes

1. Apply relevant psychological theories and research to an analysis of problems faced by employees and organizations.
2. Evaluate psychological research and theories relevant to the study of leadership and teams in organizations.
3. Recommend solutions to problems faced by organizations based on psychological theories and research.

PSY 473 Aggression, Anger, and Violence

Psychological origins and determinants of human and animal aggression.
3 Cr. Spring

Student Learning Outcomes

1. Evaluate the main theoretical psychological approaches and current research in aggression.
2. Apply aggression research to either their own life experiences or to current events.
3. Analyze a current debate in the field of aggression and evaluate original research articles to address the debate.

PSY 489 Psychology of Learning

Psychological theories of learning. Human and animal research. Constraints on learning.
Prereq.: PSY 282, PSY 325 3 Cr. Spring

Student Learning Outcomes
1. Compare and contrast functionalistic, associationistic, cognitive, and neurophysiological theories of learning.
2. Apply the concepts of a theory of learning to a behavior change project.
3. Evaluate the methods and results of classic learning experiments.

PSY 490 Psychological Disorders
Classification, discription, etiology and treatment of the disorders of personality organization and behavioral integration.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Apply the DSM (Diagnostic and Statistical Manual) to classify mental illnesses based on behavioral and psychological characteristics.
2. Distinguish among treatment and prevention strategies for psychological disorders.
3. Explain the ethical and legal issues associated with the diagnosis and treatment of psychological disorders in a clinical setting.

PSY 491 Forensic Psychology
A variety of psychology domains as they apply to criminal behavior and thought as well as career pathways in forensic psychology.
Coreq.: Cr. Fall

Student Learning Outcomes
1. Analyze popular press readings of actual criminal cases for presentation of facts as they agree with (or not) theoretical models of human behavior
2. Evaluate best practices for better ways to present crime data presentation 3. Analyze interface of law and psychology 4. Examine career paths and preparation for those careers 5. Interpret psychological research and application in other fields and apply it to criminal and psychopathic behavior
6. Synthesize information from a variety of fields (such as medicine, criminal justice, sociology, etc.)

PSY 492 Health Psychology
Research, theory and practice involved in the interrelationship of behavior, psychological states, physical health and social well being. Discussion of prevention, development of major illness, and health care policy.
3 Cr. Spring

Student Learning Outcomes
1. Examine the relationships among stress, coping, psychological health, and physical health.
2. Evaluate their own personal health behaviors, attitudes, and lifestyle choices via an application of their knowledge of health-compromising and health-promoting behaviors.
3. Analyze key behavioral patient variables related to health care (e.g., utilization of health care, communication between patients and practitioners, chronic management problems).

Radiologic Technology (RADT)

RADT 201 Introduction to Radiography
Radiography and its role in health care delivery. Academic and administrative structure and the profession as a whole. Basic principles of radiation protection.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify the role of radiography in health care.
2. Diagram the structure of the Radiologic Technology profession.
3. List and explain the basic principles of radiation protection.

RADT 202 Radiation Physics
Review of radiation physics, fundamentals of x-ray production, beam characteristics and units of measurement.
6 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. List at least five types of electromagnetic radiation.
2. Discuss and explain how x-rays are produced.
3. List and describe the five basic photon interactions with matter.
4. Solve numerical problems in radiation physics.
5. Compute x-ray beam attenuation.
6. Define and apply x-ray tube rating limits and charts.
7. Identify and describe the function of the components in an x-ray tube.
8. Calculate changes in x-ray exposure based on changes in x-ray tube settings and distance.
9. Explain and use quantitative methods to describe beam quantity and quality.

RADT 203 Ethics and the Law in the Radiologic Sciences

Parameters of professional practice and law with emphasis on radiographer's area of responsibility in the delivery of health care.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Summarize the HIPAA regulations.
2. Apply the HIPAA regulations in a clinical setting.
3. List and explain major legal and ethical issues in Radiologic Technology.

RADT 204 Applied Medical Terminology

Review of medical terminology with emphasis on words, abbreviations and symbols used in radiography.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Correctly spell medical terminology.
2. Correctly define and use medical terms.
3. Correctly define and use medical abbreviations and symbols.
4. Define and use standard terminology for patient positioning and projection.

RADT 205 Applied Human Structure and Function

Basic human structure and function with emphasis on the relationship of structure and function to radiologic studies.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify bony landmarks appropriate to Radiologic Technology.
2. State and locate appropriate patient anatomy and state and use appropriate patient positioning for imaging of the thorax.
3. State and locate appropriate patient anatomy and state and use appropriate patient positioning for imaging of the abdomen and GI area.
4. State and locate appropriate patient anatomy and state and use appropriate patient positioning for urological studies.
5. State and locate appropriate patient anatomy and state and use appropriate patient positioning for imaging of the spine and pelvis.
6. State and locate appropriate patient anatomy and state and use appropriate patient positioning for imaging of the head.
7. State and locate appropriate patient anatomy and state and use appropriate patient positioning for imaging of the extremities.
8. Explain the human physiology corresponding to six different anatomic areas.

RADT 206 Radiographic Procedures

Theory and practice of imaging various systems and organs with emphasis on the production of radiographs of optimal diagnostic quality.
6 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Describe, use, and explain all radiographic procedures designated as mandatory by the American Registry of Radiologic Technologists (ARRT) for the chest and thorax.
2. Describe, use, and explain all radiographic procedures designated as mandatory by the ARRT for the upper extremities.
3. Describe, use, and explain all radiographic procedures designated as mandatory by the ARRT for the lower extremities.
4. Describe, use, and explain all radiographic procedures designated as mandatory by the ARRT for the spine and pelvis.
5. Describe, use, and explain all radiographic procedures designated as mandatory by the ARRT for the abdomen.
6. Describe, use, and explain all surgical, mobile, and pediatric radiographic procedures designated as mandatory by the ARRT.
7. Describe, use, and explain fifteen non-mandatory radiographic procedures.

RADT 207 Medical Imaging and Processing

Factors that govern and influence the production of the radiographic image on radiographic film. Requirements for the processing of radiographic film, film holders, and intensifying screens. Clinical applications of the theoretical principles and concepts.
4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Correctly use film-screen imaging methods.
2. Correctly use digital image processing methods.
3. Explain and use software appropriate for image display.
4. List and discuss criteria for image evaluation.

RADT 209 Methods of Patient Care

Concepts and practice of patient care, physical and psychological needs of the patient and family, routine and emergency patient care procedures,

infection control and patient education.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. List emergency patient care procedures.
2. Employ, restate, and explain appropriate procedures for infection control.
3. Describe and use CPR techniques on a dummy.
4. Explain and use patient transfer activities and care of patient medical equipment.

RADT 210 Radiation Protection

Principles of radiation protection, radiation protection responsibilities of the radiographer for patients, personnel, and the public. Concepts of As Low As Reasonably Achievable (ALARA), Negligible Individual Risk Level (NIRL) and stochastic and non-stochastic effects are discussed. Regulatory agencies are identified and agency involvement in radiation protection are discussed.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Solve numerical problems in radiation protection.
2. List and explain the biological aspects of radiation protection.
3. List and explain techniques for minimizing patient exposure to radiation.
4. Explain the basic concepts of radiation protection, including ALARA.
5. Cite radiation dose limits.
6. List and discuss the appropriate organizations involved in radiation protection.

RADT 211 Radiation Biology

Principles of the interaction of radiation with the living systems. Radiation effects on biological molecules and organisms and factors affecting biological response. Acute and chronic effects of radiation.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Solve problems in radiation physics related to radiation biology.
2. List and explain the ways that radiation interacts with living systems.
3. Label and define the components of a cell survival curve.
4. Solve numerical problems in radiation biology, including risk estimates.
5. List and describe acute and chronic effects of radiation exposure.
6. List sources of natural and man-made background radiation.
7. List and describe examples of human populations that are or have been exposed to unusual levels of background radiation.
8. List and discuss dose-effect models.
9. Cite radiation dose limits.

RADT 212 Imaging Equipment

Equipment routinely utilized to produce diagnostic images. Various recording media and techniques.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Select appropriate x-ray imaging parameters for patient imaging.
2. Evaluate image quality of clinical images.
3. Determine proper patient positioning for image procedures.
4. Operate x-ray imaging equipment in a hospital internship setting.
5. Operate and explain the theory and use of imaging equipment using CR, DR, and film image receptors.
6. Correctly use technique charts.

RADT 375 Clinical Radiologic Technology II

Clinical practice and patient care in radiography. Fundamentals of radiography and health care. Radiation biology.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Learn outcomes related to Clinical Practice and Patient Care; execute medical imaging procedures to produce adequate images under appropriate supervision; describe how to handle emergency situations; explain (and demonstrate through appropriate actions) how to relate to different kinds of patients in various situations; describe and explain proper clinical practice procedures that meet appropriate standards for safety, ethics, and legality; identify and explain the responsibilities of the radiologic technologist; describe and explain the standards for practice for radiography.
2. Learn outcomes related to the Fundamentals of Radiography and Health Care; identify and explain the roles and responsibilities of different personnel in a radiology department and different departments in a hospital/clinic; explain the different services available in a radiology department; demonstrate a familiarity with concepts related to regulations, accreditation, and licensure;

demonstrate background knowledge related to the health care system as a whole and the different systems of paying for health care.
3. Learn outcomes related to Radiation Biology; list and discuss the different sources of radiation exposure; be familiar with the different methods of calculating radiation risk; identify the different methods of determining response to radiation; explain the effects of different kinds of radiation exposure.

RADT 406 Radiographic Procedures

Advanced theory and practice of imaging various systems and organs with emphasis on the production of radiographs of optical diagnostic quality.
6 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Define and explain radiographic and anatomic terminology.
2. Use safe and appropriate techniques in radiography.
3. Select, use, and explain appropriate radiographic procedures as designated by the American Registry of Radiologic Technologists (ARRT).
4. Evaluate patient placement and radiographic image quality.

RADT 408 Evaluation of Radiograph

Practicum in which students participate in formal sessions for radiographic film evaluation.
4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Identify and explain factors influencing image quality.
2. Evaluate image quality of single images and compare images with each other.
3. Propose and discuss alternative methods for improving image quality.

RADT 409 Radiation Pathology

Chronic and acute biological effects of radiation.
6 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Review the characteristics and sources of different types of radiation.
2. List and describe the effects of radiation exposure.
3. List and explain how to minimize radiation exposure.
4. Perform calculations in radiation biology and radiation protection.
5. Use safe and appropriate techniques in radiography under supervision.

RADT 411 Computers in Radiologic Sciences

Principles of computer technology. Concepts and terminology. Computer applications in radiology.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. List and explain the steps to acquire and display images with various systems.
2. Identify the similarities and differences between acquisition systems and describe which parameters have the greatest impact on image quality.
3. Explain the filmless and electronic medical imaging environment in the radiology department.
4. Explain and use relevant software.

RADT 412 Pharmacology and Drug Administration

Basic concepts of pharmacology. Theory and practice of basic techniques of venipuncture and administation of diagnostic contrast agents and/or intravenous medications. Appropriate delivery of patient care.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. List and explain different types of contrast media and why they are used.
2. Recognize clinical symptoms of adverse reactions to various contrast media.
3. Analyze a patient+s medical history to determine the possibility of adverse reactions.
4. Safely prepare and administer appropriate contrast agents and intravenous medications.

RADT 475 Clinical Radiologic Technology IV

Digital image acquisition and display. Pharmacology and drug administration. Radiation protection. Radiographic pathology.
Coreq.: 1-16 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Learn outcomes related to Digital Image Acquisition and Display; discuss fundamentals of digital radiography and defiine the terminology used; describe various types of digital receptors, describe evaluative criteria used for digital imaging; compare different imaging systems; demonstrate appropriate techniques for image acquisition; associate the effects of image acquisition and

processing on image appearance; describe and identify Picture Archiving and Communication System components and functions; and explain how the DICOM standard is used.
2. Learn outcomes related to Pharmacology and Drug Administration by; defining drug classifications and classifying drugs according to category; explain actions, uses, and side effects of relevant drugs; demonstrate the ability to use appropriate methods and techniques to prepare and administer contrast agents and intravenous medications; demonstrate knowledge of how to deal with complications; explain the effects of drugs on medical imaging procedures.
3. Learn outcomes related to Radiation Protection; explain the ALARA concept and how it is applied; define units of measurement used in radiation protection; be familiar with fundamental concepts in radiation protection; identify and appropriately use the various types of patient shielding; specify the different kinds of dose limits; describe regulations applicable to radiation protection; demonstrate how the operation of x-ray equipment influences radiation safety; describe and perform shielding calculations.
4. Learn outcomes related to Radiographic Pathology; classify diseases and identify complications; describe the basic manifestations of pathological conditions and their relevance to radiologic procedures; describe the radiologic appearance of diseases; identify imaging procedures and interventional techniques appropriate for the most-commonly seen diseases.

Recreation (REC)

REC 112 Recreational Camping Skills

General camping information and skills. Overnight camping experience. Not for recreation majors.
2 Cr. Spring

REC 201 Introduction to Recreation/Sport Management

Designed to explore the field of recreation/sport management including history and theories of professional organizations, characteristics of age groups and ability levels, and observations of recreational agencies. Recommended take REC 241 same semester as REC 201.
Coreq.: 3.0 Cr. Fall

Student Learning Outcomes
1. Discuss the basic concepts of leisure, play, recreation, and sport as they occur in contemporary society.
2. Explain the significance of leisure, play, recreation, and sport in contemporary society.
3. Contrast the historical, political, and technological influences on the leisure service profession and the trends for the future.
4. Identify various professional organizations and their program and services.
5. Discuss professional ethical standards and codes of behavior.
6. Explain the importance of and possibilities for continuing professional education and development.
7. Compare the diversity of career choices available in Recreation and Sport Management.
8. Explain profession's responsibility to extend leisure, play, and recreation opportunities to all segments of society; including those with special needs and disabilities.
9. Discuss the affect of the legislative and policy making processes as they affect the professional services.
10. Demonstrate professional skill improvement.

REC 212 Camp Counseling

Types of camps, underlying philosophies, trends, camp standards, program planning, and cabin counseling.
2 Cr. Spring

REC 214 Wilderness Skills

Wilderness skills such as canoeing, rockclimbing, orienteering and minimum impact techniques. Safety in outdoor adventure pursuits.
3 Cr. DEMAND

REC 241 Recreation Leadership Techniques

Analysis of recreation leadership techniques, intervention, and styles with individuals and groups of different ages and ability levels. An emphasis will be placed on skill development through practical applications.
3 Cr. Fall

Student Learning Outcomes
1. Explain the significance of play, recreation, and leisure throughout the life span.
2. Discuss the concept of leisure lifestyle for continued individual development and expression throughout the life span.
3. Discuss ethical principles and professionalism as

they relate to recreational leadership.
4. Apply inclusive practices as they relate to cultural differences, levels of authority, leadership styles, socio-economic backgrounds, and level of ability.
5. Explain the effect of group dynamics and processes with various groups.
6. Contrast small group and large group behaviors.
7. Apply various leadership techniques for individual, group, and community experiences.
8. Apply leadership strategies and techniques for a wide variety of populations and within a wide variety of settings.
9. Discuss theories of leadership and personal styles of leadership.
10. Explain conceptual, interpersonal and technical skill and competencies of leader.

REC 301 Recreation Program and Event Planning

Methods and guidelines for the development, organization and implementation of recreational programs and events, and the opportunity to design, lead and evaluate activities with recreational organizations within the community.
Prereq.: REC 201 Coreq.: 3.0 Cr. Spring

Student Learning Outcomes

1. Discuss the motivations and characteristics of groups relative to planning and creating recreation experiences.
2. Explain the importance of organized recreation in a person's lifestyle.
3. Design leisure programs and services for a variety of settings.
4. Analyze programs, services, and resources in relationship to participation requirements.
5. Apply procedures and techniques for assessment of leisure needs for various groups.
6. Write outcome-oriented goals and objectives.
7. Organize leisure services programs and events using various formats.
8. Evaluate leisure services programs and events using various techniques.
9. Develop program plans following a prescribed format.
10. Demonstrate professional skill improvement.

REC 315 Recreation and Individuals with Disabilities

Needs, abilities and limitations of individuals with disabilities. Adaptations, facilitation techniques, and legislation with respect to providing recreation and leisure services for individuals with disabilities.
Prereq.: REC 201, REC 241 3 Cr. Fall

Student Learning Outcomes

1. Describe the significance of recreation and leisure for individuals with disabilities.
2. Describe the benefits and outcomes from participation in recreation and sports for individuals with disabilities.
3. Analyze local, state and federal regulations, legislation and standards related to the rights of individuals with disabilities to recreation and related services.
4. Apply the concepts of mainstreaming, integration, inclusion, normalization and advocacy.
5. Develop program adaptations based on characteristics of various groups of individuals with disabilities.
6. Analyze and apply various leadership techniques and strategies in recreation programming for individuals with disabilities.
7. Apply activity analysis and modifications in activity, program and event selextion and planning.
8. Describe the process and outcomes of leisure education programs.
9. Describe assistive devices and techniques to facilitate inclusionary opportunities.

REC 320 Challenge Course Leadership

Theory and practices of challenge course (ropes course) programming including facilitation skills, administrative practices and risk management practices.
3 Cr. DEMAND

Student Learning Outcomes

1. Evaluate and critique challenge course standards (construction & facilitator skills) outlined by professional associations (e.g., PRCA & ACCT).
2. Deduce and justify the training standards established by those organizations.
3. Explain and demonstrate experiential education in the context of adventure education.
4. Distinguish the use of a challenge course and adventure education as an alternative learning process.
5. Teach and demonstrate the concept of sequencing when developing adventure education activities.
6. Describe the key components of group dynamics and be able to demonstrate application to diverse audiences.
7. Design and justify program plans for a multitude of challenge course programs.
8. Demonstrate proper techniques, operational skills and risk management of a challenge course complex.

9. Produce and demonstrate effective facilitation & debriefing techniques specific to challenge course programming.
10. Appraise participant outcomes (group and individual) as part of the assessment process.

REC 333 Recreational Facility Design and Management

An insight into planning and management of various recreational facilities.
Prereq.: REC 201 3 Cr. Spring

Student Learning Outcomes

1. Analyze standards and principles necessary in the planning of a new Recreation/Sports facility or the renovation of an existing one.

2.
3. Analyze an existing facility and use that expertise to design or redesign a more functional facility.
4. Compare accessibility standards for various facilities and settings.
5. Compare the operations and maintenance of various facilities and settings for recreation and sports programs and events.
6. Develop a planning sequence for designing and building or renovating a facility.
7. Determine project funding needs when building a new or renovating an existing one.
8. Apply facility management skills for overseeing a facility while maintaining profitability.
9. Develop skills needed to effectively manage a sports or a public assembly facility.

REC 415 Organization and Administration of Recreation and Sports Management

Daily management of human resources and departmental operations: departmental philosophies, policies and procedures; personnel management and professional competence; management styles and personnel laws.
Prereq.: REC 233 or REC 301 3 Cr. Fall

REC 416 Marketing for Recreation and Sports Management

Principles of event and sport marketing; development of a marketing plan, promotional methods, marketing research, public relations, examination of sport as a consumer product and as a medium by which to sell consumer products.
Prereq.: REC 233 or REC 301 3 Cr. Fall

REC 418 Financing for Recreation and Sports Management

Financial requirements in Recreation Administration and Sport Management including budgeting, bonds, grants, fundraising, sponsorship, and fiscal accountability.
Prereq.: REC 233 or REC 301 3 Cr. Fall | Spring

Student Learning Outcomes

1. Discuss of basic accounting principles.
2. Define financial terminology.
3. Analyze fiscal accountability procedures and financial statements.
4. Describe principles of budgeting and advantages and disadvantages of budget types and formats.
5. Develop an organizational operating budget and financial statements.
6. Discuss capital budgeting and capital improvement planning.
7. Describe sources of revenue.
8. Analyze the use of taxes, bonds and levies as revenue streams.
9. Analyze grants, fundraising and sponsorship as revenue streams.
10. Analyze the use of concessions, merchandising and ticket sales as revenue streams.

REC 420 Principles of Safety in Recreation and Sports Management

Development and implementation of sound policies, procedures and safety regulations as the law pertains to recreation and leisure services and sport management.
Prereq.: REC 415 3 Cr. Spring

Student Learning Outcomes

1. Analyze legal foundations and responsibilities of recreation and sport management.
2. Discuss the impact of policy formation in all levels of government and organizations.
3. Analyze the impact of constitutional, federal and state laws related to recreation and sport management organizations.
4. Discuss intentional torts as they relate to the provision of recreation and sport activities and programs.
5. Analyze concepts and principles of negligence and liability in various recreation and sport organizations.
6. Analyze safety considerations for recreation and sport activities and programs.
7. Analyze methods and techniques to minimize and manage risks in recreation and sport activities and programs.

8. Analyze the use of contracts, leases and rental agreements in various recreation and sport organizations.
9. Apply principles of risk management planning in recreation and sport management.
10. Develop risk management plan for a recreation and sport organization.

REC 433 Seminar: Recreation Administration and Leadership Theory

Analysis of organizational and administration practices used in recreation programs and a discussion of the requirements, issues, and problems encountered in internship.
Prereq.: REC 301 2 Cr. Fall

Student Learning Outcomes

1. Complete professional competency self-assessment.
2. Prepare professional resume and letters for employment.
3. Identify internship site opportunities.
4. Identify internship requirements (agency, university, student).
5. Write performance measures for internship learning objectives.
6. Complete selection interviews.
7. Document accomplishments and abilities through the use of the portfolio.
8. Discuss current trends and issues in recreation and sports management.

REC 444 Senior Internship

Practical work experience involving operation and administration of an approved recreation or sport related agency. Arranged with internship supervisor semester prior to placement.
Prereq.: REC 433 6 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Apply principles and techniques of personnel supervision in recreation and sport organizations.
2. Apply principles and techniques of financing for recreation and sport organizations.
3. Apply principles and techniques of marketing for recreation and sport organizations.
4. Apply principles and techniques of policies and procedures in recreation and sport organizations.
5. Apply principles and techniques of legal status of recreation and sport organizations.
6. Apply principles and techniques of risk management and liability in recreation and sport organizations.
7. Apply principles and techniques of documentation for recreation and sport organizations.
8. Apply principles and techniques of customer service and public relations in recreation and sport organizations.
9. Apply principles and techniques of leadership methods for different age groups and population in recreation and sport organizations.
10. Apply principles and techniques of development and organization of programs, activities and events in recreation and sport organizations.

Religious Studies (REL)

REL 100 World Religions (Diversity)

The beliefs, practices, and history of the world's religions, including Christianity, Judaism, Islam, Hinduism, Buddhism, Taoism, and other traditions such as Native American Religion and African Traditional Religion.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

REL 150 Introduction to the Old Testament/Hebrew Bible

The books of the Old Testament/Hebrew Bible, their cultural background, and the context from which they emerged.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

REL 151 Introduction to the New Testament

The historical development, literary shape, cultural context, and religious message of the New Testament writings.
3 Cr. Fall

Student Learning Outcomes

1. Discuss and write about readings from the New Testament, such as the Gospels and Paul's epistles.
2. Describe the historical context of the New Testament.
3. Compare various methods of interpreting New Testament writings.

REL 180 Religion: Race and Racism (Diversity)

Use and abuse of religious texts in American religious communities; racist themes in contemporary religious discourse.
3 Cr. Spring GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

Student Learning Outcomes

1. Students will interpret classic religious texts to identify the religious sources that justify racism in the U.S.
2. Students will analyze the contemporary religious thought of civil rights leaders.
3. Students will identify and critique the religious texts and doctrines used by racists in the U.S. e.g. KKK.
4. Students will apply their understanding to contemporary U.S. religious institutions engaged in multiculturism.
5. Students will analyze and deconstruct racist American discourse that uses religious texts and doctrines.

REL 201 Religious Pluralism

An introduction to religious pluralism in America. Religious faith and practice, tolerance, and public policy in a religiously diverse, democratic society.
3 Cr. Fall | Spring GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

REL 225 Asian Religions

Beliefs, practices, and history of religion in Asia. Includes various forms of Buddhism and Hinduism; Jainism and Sikhism; Confucianism and Taoism; Shintoism.
3 Cr. Spring GOAL AREA 8: GLOBAL PERSPECTIVES

REL 300 Topics in Contemporary Religious Thought

Recent developments in theology and philosophy of religion, such as the nature of God, the problem of religious diversity, the role of revelation, the impact of science on faith, death and immortality, and the justification of religious belief. May be repeated up to 9 credits with different topics.
3 Cr. DEMAND

REL 411 Topics in Religion

Issues, texts, or subjects from various religions. Students may repeat with different topics up to 9 credits.
3 Cr. DEMAND

Student Learning Outcomes

1. Research different topics in religion.

REL 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr.

Russian (RUSS)

RUSS 101 Elementary Russian I

Introduction to the Russian language and culture including mastery of the Cyrillic alphabet and proficiency in basic vocabulary and grammar.
4 Cr. Fall GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

RUSS 102 Elementary Russian II

Introduction to the Russian language and culture including mastery of the Cyrillic alphabet and proficiency in basic vocabulary and grammar.
Prereq.: RUSS 101 4 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

RUSS 110 Introduction to Russian Culture

Diverse cultural, historical, and socio-political features of Russian speaking cultures and basic Russian through film and music. Taught mainly in English. This course augments 101 and 102 and is especially recomended for students who want more contact with the modern culture and less emphasis on language.
3 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

RUSS 201 Intermediate Russian I

Review and extend the skills of listening, reading, speaking, and writing for purposes of communication using a variety of technological learning aids. Directed towards linguistic and cultural awareness. Special emphasis on extension and application of listening and reading skills strategies using various authentic sources.
Prereq.: RUSS 102 or equivalent for RUSS 201. RUSS 201 or equivalent for RUSS 202. 4 Cr. Fall GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

RUSS 202 Intermediate Russian II

Review and extend the skills of listening, reading, speaking, and writing for purposes of communication using a variety of technological learning aids. Directed towards linguistic and cultural awareness. Special emphasis on extension and application of listening and reading skills strategies using various authentic sources.

Prereq.: RUSS 102 or equivalent for RUSS 201. RUSS 201 or equivalent for RUSS 202. 4 Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

RUSS 301 Conversation & Composition I

Broadening skills in oral and written expression on themes drawn from Russian literature and contemporary society.
Prereq.: RUSS 202 3 Cr. Fall

Student Learning Outcomes

1. Read and interpret primary texts in the target language for their general and cultural information.
2. Write narratives and descriptions of a factual nature on familiar topics, consisting of several paragraphs at the Intermediate level of Russian according to ACTFL Proficiency scale.
3. Negotiate language in various formal and informal settings, in partner and groupwork, in speaking and writing.
4. Discuss the target culture in view of global society, and from a variety of perspectives, including historical, geographical, political, artistic and contemporary viewpoints.
5. Recognize that culture is neither monolithic nor static and that developing insights into the variability of cultural phenomena is a lifelong process.

RUSS 302 Conversation & Composition II

Broadening skills in oral and written expression on themes drawn from Russian literature and contemporary society.
Prereq.: RUSS 301 3 Cr. Spring

Student Learning Outcomes

1. Analyze primary texts of varying lengths and of different type for their general and cultural information, using both reading and listening skills.
2. Write multi-paragraph narratives, descriptions and argumentations in Russian at the Intermediate level according to the ACTFL proficiency scale.
3. Negotiate language in various formal and informal settings, in partner and group work, in speaking and writing.
4. Appraise how both cultural processes and products are important and cultural knowledge and understanding are interdisciplinary.
5. Describe and analyze examples of authentic cultural artifacts such as literature, art, music or others.

RUSS 323 Form and Style in Russian Literature

Selections in Russian literature
3 Cr. Fall

Student Learning Outcomes

1. Identify and describe key movements of Russian literature.
2. Explain the socio-historical, political and other cultural contexts of distinct Russian literary movements.
3. Analyze important works of Russian Literature.
4. Summarize and paraphrase content of important works of Russian Literature.
5. Compare styles and themes of varied works and movements of Russian literature.

RUSS 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-15 Cr. Fall | Spring | Summer

RUSS 452 Advanced Grammar

Analysis of Russian morphological and syntactic features requiring special attention for native speakers of English.
3 Cr. DEMAND

RUSS 457 Senior Project (B.A.)

Research-based project on selected topics in Russian literature, linguistics, or culture under the guidance of instructor. Capstone course in transition to graduate studies or career. Taken during last academic year of undergraduate studies.
2 Cr. Fall | Spring

School of Health and Human Services (SHHS)

SHHS 111 Introduction to Health and Human Services

Information on health and human services majors/minors, requirements, and career information. Assist students with deciding if a career in health or human services is a good fit for them through reflection of values, skills, and interests.
1 Cr. Fall | Spring

Sciences (SCI)

SCI 226 Science for Elementary Teachers 1

Concepts of life, earth and space, and physical science. Basic science inquiry skills.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Use the skills of scientific inquiry to make and communicate scientific observations of objects and processes; to construct multiple inferences to explain observations and make predictions using these inferences; to make metric measurements using appropriate tools and equipment; to create scientific classification systems based on observable properties; and to use and evaluate models of scientific systems or processes.
2. Explain state and national legal responsibilities and safety guidelines for teaching science in the elementary grades.
3. Compare and contrast connections across the domains of science and between science and other subjects.
4. Identify, describe, and apply the fundamental concepts and principles of life science.
5. Identify, describe, and apply the fundamental concepts and principles of earth and space science.

SCI 227 Science for Elementary Teachers 2

Further concepts of life, earth and space, and physical science. Additional science inquiry skills.
Prereq.: SCI 226 3 Cr. Fall | Spring

Student Learning Outcomes
1. Use skills of scientific inquiry to collect, organize, and analyze a variety of scientific data; to construct hypotheses and design and conduct scientific investigations to evaluate them; and to compare and use varying types of scientific inquiry.
2. Compare and evaluate competing scientific explanations and theories, and make and defend a scientific argument.
3. Identify, describe, and apply fundamental concepts and principles of physical science concerning to physical and chemical properties, structure, and changes of matter; to position, motion, and force; to forms and transfer of energy; and to light, sound, heat, electricity, and magnetism.
4. Identify, describe, and apply the fundamental concepts and principles of earth and space science to properties of earth materials; to objects and changes in the sky; to structure and processes of the solid earth portion of the earth system; to processes and change on the Earth's surface; and to history of the earth and life.

SCI 420 Teaching Science in a Social Context

Teaching science in the context of human enterprise.
Prereq.: Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission Coreq.: STEM 420, IM 422, ED 431 3 Cr. Fall

Student Learning Outcomes
1. Able to demonstrate their skills in scientific inquiry be completing a full inquiry research project and present it at the Students research Colloquim.
2. Able to demonstrate knowledge of inquiry teaching by developing a 10 day unit plan reflective of Minnesota state science standards.
3. Able to demonstrate their understanding of the Nature of Science and Engineering by completing a comparative analysis of the intent, process and products of each.

SCI 422 Computer Applications in Science Education

Acquaint elementary/secondary education majors with computer applications (software, hardware, computer-based communication) in science education. Familiarity with word processing and spreadsheets is advised.
3 Cr. Spring

Student Learning Outcomes
1. Research and summarize at least five science education software applications of choice.
2. Design a unit of instruction with a minimum of three lesson plans with assessments that utilizes researched science education software.
3. Research and present summarized information on at least three interactive science education software applications.
4. Demonstrate proficiency in using science education software and hardware, that includes science data collecting probes.

SCI 430 Methods & Materials for Teaching Secondary Science

An introduction to modern techniques and curricula for teaching secondary school life science.
Prereq.: Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission Coreq.: STEM 421, ED 421, ED 451 3 Cr. Spring

Student Learning Outcomes
1. Analyze state and national standards for planning science content, instruction, assessment, and

professional development.
2. Identify science content and adapt and design curricula to meet the interests, knowledge, understanding, abilities, and experiences of students.
3. Construct teaching and assessment strategies that support the development of student understanding based on learner outcomes that nurtures a community of science learners.
4. Research and summarize scientific literature, journals, and technological resources to broaden personal knowledge of science and science teaching.
5. Analyze various forms of teacher and student instructional resources for their value in developing scientific literacy of all students.
6. Identify and analyze a variety of teaching models, including scientific inquiry, the learning cycle, cooperative learning, and constructivist teaching and appropriately incorporate at least one of them into a unit plan.
7. Model the use of demonstrations, discrepant events, analogies, and relevant examples in lessons for the teaching of science concepts.
8. Design a unit of instruction with a minimum of five lesson plans with assessments that demonstrates standards-based teaching of science based on the Teacher Performance Assessment (TPA) that is mandated by the State of Minnesota.
9. Utilize state and national safety guidelines regarding personal and legal responsibilities in the teaching of science in the middle and high school setting.
10. Research minorities in science and design a lesson that can be presented in a secondary science course, based on an anti-racism theme, based on the information gained from the research.

SCI 434 Contemporary Science Curriculum K-8

Literature based overview of contemporary science curriculum for elementary schools. A hands-on overview of recent elementary programs. Includes philosophy, rationale, sample activities and assessment.
Prereq.: BIOL 302, CHEM 302, ESCI 302 3 Cr. DEMAND

Student Learning Outcomes
1. Analyze state and national standards and align to current science curriculum kits for elementary science classrooms.
2. Analyze how current curriculum kits address common student misconceptions found in the science education literature and journals.
3. Compare and contrast at least five separate elementary science curriculum resources based on standards based science content, pedagogy and availability of resources for teachers.

SCI 436 Environmental Education for Teachers

Examination and experience with environmental curricula and materials for classroom and field instruction.
3 Cr. Fall | Summer

Student Learning Outcomes
1. Analyze state and national standards for planning environmental science content, instruction and assessment.
2. Design a unit of instruction with a minimum of five lesson plans with assessments utilizing researched environmental science resources.
3. Research and summarize environmental science literature, journals, and technological resources to broaden personal knowledge for teaching environmental science.
4. Identify and analyze a variety of environmental science teaching resources to be used in a classroom.

SCI 438 Contemporary Principles in Science Education

Topics to be determined and announced in class schedule.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Develop a framework of year-long and short-term goals for students based on National and State Science Standards.
2. Research and analyze the scientific inquiry teaching model and appropriately incorporate the model into a unit plan on a science topic of choice.
3. Research and summarize science education literature, journals, and technological resources to broaden personal knowledge for use in the development of science education curriculum.

SCI 440 Seminar in Science Teaching

A companion to field experiences student teaching. Reflections and application of science teaching strategies. Repeatable up to 6 credits.
Coreq.: 1-6 Cr. Fall | Spring

Student Learning Outcomes
1. Develop and deliver appropriate curricula and materials for teaching secondary school science

during their student teaching experience.
2. Summarize and appraise the use of appropriate safety requirements for teaching secondary school science as used in their teaching placement.
3. Evaluate and reflect on the use of appropriate teaching strategies used during their student teaching experience.
4. Research and design a plan for professional development experiences for their first years of teaching.
5. Prepare a Teacher Performance Assessment (TPA) portfolio based on a 5 day unit plan, as described by the State of Minnesota.

SCI 442 Special Topics in Science

An opportunity to pursue an in-depth study of a science topic such as Environmental Education, Flora Fauna of Minnesota, Astronomy, Chemistry in the Home, Minnesota Rocks and Waters, and other topics as appropriate.
3 Cr. Fall

Student Learning Outcomes

1. Utilize and align state and national standards to a selected science content or topic in science education.
2. Research and analyze science education literature and the impact on standards based teaching.
3. Research scientific literature, journals, and technological resources to broaden personal knowledge of science and science teaching in selected topic.

SCI 444 Internship in Science

Participation in a faculty research project.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Successfully collaborate with faculty on chosen research project.
2. Research and summarize science education literature and journals and papers on the chosen research topic.

School of the Arts (SOTA)

SOTA 101 Introduction to Arts Entrepreneurship

Researching and analyzing grant opportunities in the arts at local, regional, state, and national levels. Writing grant proposals. Skills and techniques for arts management, such as organizing performance seasons, venues for arts events, networking, and publicity.
3 Cr. Even Fall

Student Learning Outcomes

1. Research arts grant opportunities.
2. Write grants for approval.
3. Use networking skills to cultivate working relationships with civic officials, philanthropic organizations, and other granting agencies.
4. Identify management skills used to organize events.
5. Identify and use appropriate publicity skills.

SOTA 401 Arts Entrepreneurship Practicum

Capstone experience synthesizing entrepreneurship skills such as business planning, digital portfolios, budget planning, and start-up capital, within the arts.
Prereq.: SOTA 101, ACCT 291, MKTG 320, MGMT 364
3 Cr. Fall

Student Learning Outcomes

1. Manage and use a business plan for the arts.
2. Select and create a digital portfolio for the arts.
3. Apply techniques for real world budget planning and money management in an arts entrepreneurial context.
4. Synthesize and integrate business learning with artistic endeavors.
5. Apply basic principles of entrepreneurial behavior to enhance the value of the arts in society.

Science, Technology, Engineering and Mathematics Education (STEM)

STEM 420 STEM and Information Media Field Experience

Merging theory and practice for developing inclusive and responsive curriculum, instruction and assessment in STEM in the pre K-12 setting during an in-depth field experience. Active involvement in classrooms includes working with ESL, special education or other historically under-served students as well as incorporating information media into the classroom.
Prereq.: Admission to major program and teacher education. Coreq.: ED 431 and IM 422 and either MATH 431 or SCI 420 1 Cr. Fall

Student Learning Outcomes

1. Analyze and observe the culture of the school and classroom.
2. Create safe, respectful, democratic cultures and

learning communities in the classroom.
3. Apply communication and relationship-building strategies with students, peers, school employees, and parents/community members.
4. Implement inclusive and equitable curricula, assessment, and instruction based on diverse learner needs.
5. Apply technology standards to instructional activities in STEM and content area.
6. Develop and team teach interdisciplinary curriculum.
7. Apply STEM content to instructional activities in a content area.

STEM 421 STEM and Content Literacy Field Experience

Merging theory and practice for developing inclusive and responsive curriculum, instruction and assessment in STEM in the pre K-12 setting during an in-depth field experience. Active involvement in classrooms includes working with ESL, special education or other historically under-served students as well as incorporating content literacy into the classroom.
Coreq.: ED 421 and ED 451 and either MATH 432 or SCI 430 1 Cr. Spring

Student Learning Outcomes

1. Analyze and observe the culture of the high school environment and classroom.
2. Create safe, respectful, democratic cultures and learning communities in the high school classroom.
3. Apply communication and relationship-building strategies with students, peers, school employees, and parents/community members.
4. Implement inclusive and equitable curricula, assessment, and instruction based on diverse learner needs.
5. Apply language development, literacy knowledge, and skills to instructional activities in a content area.
6. Develop and team teach interdisciplinary curriculum.
7. Apply STEM content to instructional activities in a content area.

STEM 425 Engineering and Technology for the P-6 Classroom

The STEM teacher's role in the P-6 classroom, focusing on engineering and technology. Hands-on, problem solving activities for the P-6 classroom. Curriculum development, instructional strategies, and use of technology.
Prereq.: MATH301;SCI226orSCI227;ED200orSPED200orCFS200 3 Cr. Fall | Odd Summer

Student Learning Outcomes

1. Identify effective STEM curriculum.
2. Develop STEM curriculum for P-6 students.
3. Use the Project Lead The Way curriculum in a classroom setting.
4. Apply formative and summative assessment.
5. Apply Minnesota state educational standards in Science, Mathematics and National Standards of Technological Literacy.
6. Create activities for P-6 students that are STEM based.
7. Implement technology in activities for P-6 students.

STEM 431 Physics for the P-6 Classroom

Physics topics from mechanics, thermodynamics, waves and sound, electricity and magnetism, and optics. Problem solving and laboratory skills for the P-6 classroom.
Prereq.: Math301;SCI226orSCI227;ED200orSPED200orCFS200 Coreq.: 3.0 Cr. Fall | Odd Summer

Student Learning Outcomes

1. Describe motion (kinematics) using quantitative vocabulary.
2. Apply Newton's laws to mechanical systems.
3. Solve dynamics problems using energy and momentum concepts.
4. Manipulate and control electric and magnetic forces.
5. Analyze basic electric circuits.
6. Verify properties of light.

STEM 442 Teaching and Learning Life, Earth and Space Science for the P-6 Classroom

Research, modeling, and investigations of the Minnesota Science Standards K-6 in life and earth science. Content, methods, materials, assessment, integration of STEM into science education.
Prereq.: MATH301;SCI226orSCI227;ED200,SPED200,CFS200 3 Cr. Spring | Even Summer

Student Learning Outcomes

1. Identify how STEM subjects are interrelated and how incorporating STEM into life, earth, and space science classrooms impacts student learning.
2. Apply knowledge of the K-6 Minnesota Science Standards.

3. Evaluate methods, materials, and content in teaching and learning life, earth, and space science.
4. Apply research in selecting methods and materials for student learning in life, earth, and space science.
5. Evaluate current trends in teaching and learning life, earth, and space science.
6. Identify technologies as an instructional tool in the P-6 life, earth, and space science classroom.
7. Demonstrate appropriate life, earth, and space science teaching methods, materials, and content for teaching P-6 students.
8. Demonstrate appropriate assessment of P-6 life, earth, and space science students.

STEM 451 Reasoning and Proof for the P-6 Classroom

Problem solving, conjecture, generalization, and proof in effective teaching of STEM. Mathematical reasoning as an iterative process of conjecturing, generalizing, and investigating. Topics are drawn from set theory, logic, arithmetic, algebra, geometry and STEM fields.
Prereq.:
MATH301;SCI226orSCI227;ED200orSPED200orCFS200 3 Cr. Fall | Odd Summer

Student Learning Outcomes

1. Formulate and interpret statements presented in Boolean logic. Reformulate statements from common language to formal logic. Apply truth tables and the rules of propositional and predicate calculus.
2. Write and interpret mathematical notation and mathematical definitions.
3. Demonstrate a mathematical proof of a stated algebraic relation using any of the following techniques: direct proof, indirect proof, contradiction, mathematical induction.
4. Demonstrate the use of mathematical reasoning by justifying and generalizing patterns and relationships.
5. Write solutions to problems and proofs of theorems that meet rigorous standards based on content, organization and coherence, argument and support, and style and mechanics.
6. Identify and use current standards (state, national, and NCTM), both content and process, for the P-6 mathematics curriculum.
7. Analyze research on the teaching and learning of problem solving, conjecture, generalization and proof in the P-6 mathematics curriculum.
8. Identify technologies as an instruction tool in the P-6 or special education classroom.
9. Use problem solving approaches to solve and justify solutions of various types of problems drawn from the STEM fields.
10. Develop lessons for the P-6 or special education classroom using recent research on the teaching and learning of problem solving, conjecture, generalization, and proof.

STEM 452 Data and Chance for the P-6 Classroom

Data and chance in effective teaching of STEM. Data collection, organization, and analysis; measures of center and variance, inferences and convincing arguments; subjective, theoretical, experimental, and conditional probability; simulation; counting principles; mathematical expectation.
Prereq.:
MATH301;SCI226orSCI227;ED200orSPED200orCFS200 3 Cr. Spring | Even Summer

Student Learning Outcomes

1. Organize and summarize data in order to read and interpret graphs.
2. Describe data numerically using measures of center, position, spread, and equations.
3. Compute and interpret probabilities using empirical and theoretical methods.
4. Apply rules of probability to discrete and continuous distributions.
5. Generate data through sampling and experiments.
6. Use the logic of statistical inference to draw conclusions about populations.
7. Implement the ideals articulated in the data and uncertainty strands of the Principles and Standards for School Mathematics, the Minnesota K-12 Mathematics Framework.
8. Analyze research on the teaching and learning of data, statistics, and probability in the P-6 mathematics curriculum.
9. Identify technologies as an instruction tool for statistics and probability in the P-6 or special education classroom.
10. Develop lessons for the P-6 or special education classroom using recent research on the teaching and learning of data, statistics, and probability.

Social Science (SSCI)

SSCI 301 Futures Studies

An examination of the forces creating the rapid social changes which students will have to anticipate in adapting to their future life styles. A computer based lab may be included.
Prereq.: ENGL 191 3 Cr. DEMAND

Student Learning Outcomes
1. Predict and report on possible future trends after studying and observing current and historic events through various social science perspectives.
2. Explain the philosophical foundations of the field of future studies.
3. Comprehend the objective study of trends, and be able to conduct an analysis of the forces of change.
4. Extrapolate information about the present by observing trends and patterns found over time.

Social Studies (SST)

SST 104 General Social Science
Interdisciplinary social science analysis of factors which affect the person in society. Designed to lead to critical analysis of complexities and responsibilities of day-to-day living in the contemporary world.
3 Cr. DEMAND

Student Learning Outcomes
1. Use social science perspectives to identify society's impact on the individual.
2. Explain how major social science theories and philosophies impact individuals in societies.
3. Analyze the complexities and responsibilities of the modern world and its impact on the individual.

SST 204 Themes in the Social Sciences
Selected interdisciplinary social science tools will be applied to a special interest area. Students will investigate both modern and historical social science topics.
3 Cr. DEMAND

Student Learning Outcomes
1. Use social science theories and philosophies to evaluate historical and societal issues.
2. Use social science perspectives to analyze societal issues.
3. Apply social science research methods to historic and/or societal issues.

SST 253 Social Studies Licensing Program and Portfolio Development
Minnesota secondary social studies licensure regulation and process. Role of National Council for the Social Studies. Initial portfolio development.
2 Cr. Fall | Spring

Student Learning Outcomes
1. Identify central concepts, theories and philosophies of the various social sciences (history, geography, sociology, psychology, economics and political science).
2. Convert content knowledge into organized curriculum for middle and high school students.
3. Describe state and national standards and develop curriculum and pedagogy to meet these.
4. Select, critique, apply and assess social studies curriculum materials in various social studies fields.
5. Develop student assessment materials appropriate for various age groups in content areas.

SST 311 Images of the Future
Interdisciplinary look at how historical and modern events impact our image of the future as well as decision making.
3 Cr. DEMAND

Student Learning Outcomes
1. Predict and report on possible future trends after studying and observing current and historic events through various social science perspectives.
2. Explain the philosophical foundations of the field of future studies.
3. Comprehend the objective study of trends, and be able to conduct an analysis of the forces of change.
4. Extrapolate information about the present by observing trends and patterns found over time.

SST 320 Elements of Social Science
Concepts in social science appropriate for elementary school and middle school. Interdisciplinary look at the various social sciences and their impact on curriculum and pedagogy.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Assess a variety of social science disciplines and integrate them in to various curriculum and pedagogy concepts.
2. Analyze a series of social science case studies dealing with a variety of social sciences disciplines.
3. Examine how various social science disciplines look at both current and historic events.

SST 401 Concepts in Social Science
Application of interdisciplinary social science concepts to issues in contemporary societies. Specific titles to be listed in the class schedule each time the course is offered.
3 Cr. DEMAND

SST 421 Integrated Social Science

Training in the models of thought, the language, and the basic models common to social science disciplines; practice in the application of social science to a specific research project.
2 Cr. DEMAND

Student Learning Outcomes

1. Evaluate historical and societal issues through a variety of social science theories and philosophies.
2. Analyze various topics through a variety of social science disciplines and show how each of these perspectives impacts that issue.
3. Apply their knowledge of various social science fields to a specific research project.
4. Identify social science research methods and apply them to historic and/or societal issues.

SST 441 Integrating Social Studies Theory and Practice

Development of inclusive and responsive curriculum, instruction and assessment in the pre 5-12 setting during an in-depth field experience. Active involvement in classrooms includes working with ESL, special education and/or other historically under-served students.
Prereq.: Prereq.: Admittance to Teacher Education; ED 300; CEEP 361; IM 422; HURL 497; Either co-req or pre-req. ED 460 or ENGL 460 and SPED 203
Coreq.: ED 421, 431, SST 453 2 Cr. Fall | Spring

SST 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-12 Cr. DEMAND

SST 453 Teaching Social Studies in Secondary and Middle School

Philosophy, methods, and materials in teaching social studies in the middle and secondary schools. Must be completed before student teaching with at least a grade of "C".
Prereq.: Permission of social studies licensing director and ED 421/431 or concurrent enrollment in ED 421/431 4 Cr. Fall | Spring

Student Learning Outcomes

1. Define and defend the value of all the courses found within the context of a social studies program.
2. Demonstrate how all the various social sciences can be combined into one cohesive subject.
3. Create, design and critique various strategies for teaching different social studies courses for different age groups and learning abilities.
4. Investigate appropriate teaching technologies and demonstrate how to incorporate them into the classroom setting.
5. Develop student assessment materials that are appropriate for various learning styles and subjects.

SST 460 Social Science Seminar

Analysis of issues or problems of an interdisciplinary social science nature. A specific topic will be selected each time the course is offered. May be repeated up to 9 credits with different topics.
Coreq.: 1-3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

Student Learning Outcomes

1. Analyze specific social studies issues/problems through a variety of social science perspectives.
2. Investigate specific issues/problems and recommend solutions to these topics.
3. Identify social science theories/philosophies and apply them to historic and/or societal issues/problems in order to gain a deeper understanding of these topics.

SST 470 Area Studies Seminar

Interdisciplinary social science analysis of conditions of an area. A specific country or region will be selected each time the course is offered. May be repeated up to 9 credits with different country or region.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes

1. Analyze specific regions of the world by using a variety of social science concepts and philosophies.
2. Compare various regions around the world to other regions in either current or historical concepts.
3. Demonstrate how various social sciences have had an impact on how these regions are perceived in the world today.
4. Investigate how various regions have been impacted by their history, geography, economics, culture and government.

Social Work (SW)

SW 195 Social Welfare and Democratic Citizenship

Democratic citizenship and social welfare, state institutions and citizen engagement locally, nationally and globally.
3 Cr. Fall | Spring | Summer GOAL AREA 9: CIVIC ENGAGEMENT AND ETHICS

SW 213 Adolescent Problems

Adolescence as a stage of life involving physical, emotional, and social changes. Problems that lend themselves to social work interventions and social work techniques.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Analyze how the social construction of adolescence has influenced how we understand young people, their capabilities, and their potential.
2. Use models of human development to analyze their relevance in understanding today's adolescent across gender, race, and ethnicity.
3. Identify the steps essential to creating a safe, trusting relationship with adolescent clients.
4. Create effective leadership opportunities that offer adolescents new chances at competence and possibility.

SW 216 Introduction to Social Work

Social work fields of practice and an orientation to the knowledge, skills and values of the profession.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the purpose of social welfare as an institution that current American society values.
2. Describe the roles and responsibilities of the social work profession within that social welfare system.
3. Differentiate between a professional social worker's responsibilities and other social welfare providers' responsibilities.
4. Evaluate the historical evolution of the social work profession.
5. Identify selected social problems, social agencies, responses to these issues, and the role that social workers play in these various settings.
6. Analyze the impact that social welfare and social work has on vulnerable and at-risk populations.

SW 330 Human Interaction in Social Systems

Human behavior from a social system perspective. Systemic model of family, groups, organizations, and communities as an integrated framework to assess problem situations.
Prereq.: SW 195, SW 216, BIOL 103, HURL 201, HURL 206, PSY 240 or CEEP 262, SOC 160, STAT 193.
Coreq.: SW 340, SW 345 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply appropriate theoretical frameworks to human behavior across the life-span in their social environments and employ theoretical interventions to change behaviors.
2. Demonstrate the skills necessary to practice without discrimination and with respect for human diversity.
3. Critique and apply knowledge of human behavior and the social environment.
4. Recognize the extent to which a culture's structures and values may oppress, marginalize, alienate, create or enhance privilege and power.
5. Engage in policy practice to advance social and economic well-being and to deliver effective social work services.

SW 340 Fundamentals of Generalist Practice

Description of the social work profession. Presentation of a generalist practice model integrated with volunteer experience in the community.
Prereq.: SW 195, SW 216, BIOL 103, HURL 201, HURL 206, PSY 240 or CEEP 262, SOC 160, STAT 193.
Coreq.: SW 330, SW 345 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply knowledge of primary social work theories to practice with multiple client levels and within the context of social work values and ethics.
2. Identify and differentiate the social work generalist practice processes with individuals, families, groups, organizations, and communities.
3. Practice engagement techniques to gather, analyze and assess client data, strengths, and limitations.
4. Identify and evaluate client driven intervention strategies that enhance client capacity.
5. Describe and use intervention techniques to involve clients in resolution of problems.
6. Identify and use methods for ending professional relationships with clients.
7. Apply evaluation techniques to analyze and monitor interventions.

SW 345 Cross-Cultural Social Work Practice

Marginalized populations within a diversity sensitive social work practice model.
Prereq.: SW 195, SW 216, BIOL 103, HURL 201, HURL

206, PSY 240 or CEEP 262, SOC 160, STAT 193. Coreq.: SW 330, SW 340 3 Cr. Fall | Spring

Student Learning Outcomes

1. Recognize the extent to which a culture's structures and values may oppress, marginalize, alienate, create or enhance privilege and power.
2. Gain sufficient self-awareness to eliminate the influence of personal biases and values in working with diverse groups.
3. Recognize and communicate their understanding of the importance of difference in shaping life experiences.
4. View themselves as learners and engage those with whom they work as informants.
5. Select appropriate intervention strategies.

SW 350 Social Work Research Methods

Research methodologies for use in agency settings. Quantitative and qualitative approaches, program and practice evaluations.
Prereq.: Completion of pre-professional core and admission to the social work program, SW 216, SW 330, SW 340, SW 345 Coreq.: SW 360, SW 410 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify, distinguish, appraise and integrate multiple sources of knowledge, including research-based knowledge and practice wisdom.
2. Use research evidence to inform practice.
3. Critically analyze, monitor and evaluate interventions.
4. Collect, organize, and interpret client data.
5. Analyze models of assessments, prevention, intervention and evaluation.

SW 360 Social Welfare Policy

The social welfare institution and its policies; specific poverty issues are examined and critiqued.
Prereq.: Completion of pre-professional core and admission to the social work major, SW 216, SW 330, SW 340, SW 345 Coreq.: SW 350, SW 410 3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze, formulate and advocate for policies that advance social well-being.
2. Collaborate with colleagues and clients for effective policy action.
3. Provide leadership in promoting sustainable changes in service delivery and practice to improve the quality of social services.
4. Engage in practices that advance social and economic justice.

SW 410 Practice I

The generalist model of social work practice with focus on work with individuals and families.
Prereq.: Completion of pre-professional core and admission to the social work major, SW 216, SW 330, SW 340, SW 345 Coreq.: SW 350, SW 360 3 Cr. Fall | Spring

Student Learning Outcomes

1. Engage clients in the helping process respectfully and knowledgeably.
2. Write and speak effectively and professionally in working with individuals, families, and groups.
3. Understand and effectively practice the generalist practice model including the process of engagement, assessment, intervention and evaluation.
4. Effectively collect, analyze, and interpret client data.
5. Engage effectively with clients in the goal setting process.
6. Guide clients through an ethical and skillful helping relationship.

SW 411 Practice II

The generalist model of social work practice with focus on work with groups and families.
Prereq.: Completion of pre-professional core and admission to the social work major, SW 216, SW 330, SW 340, SW 345, SW 350, SW 360, SW 410 Coreq.: SW 412, SW 443 3 Cr. Fall | Spring

Student Learning Outcomes

1. Attend to professional roles and boundaries.
2. Use supervision and consultation.
3. Substantively and effectively prepare for action with individuals, families, groups, organizations and communities.
4. Assess client's strengths and limitations.
5. Help clients resolve problems.

SW 412 Practice III

The generalist model of social work practice with particular focus on macro level practice.
Prereq.: Completion of pre-professional core and admission to the social work major, SW 216, SW 330, SW 340, SW 345, SW 350, SW 360, SW 410 Coreq.: SW 411, SW 443 3 Cr. Fall | Spring

Student Learning Outcomes

1. Will advocate for client access to the services of social work.
2. Advocate for human rights and social and economic justice.
3. Engage in practices that advance social and economic justice.
4. Engage, assess, intervene, and evaluate organization and communities.

SW 417 Adolescent Mental Health and Social Work Practice

Adolescent developmental theories, mental health, current issues, school issues, treatment modalities, global perspectives, and current best practices for treatment.
Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Analyze adolescent development through the 21st century.
2. Evaluate how past and current adolescent theories influence work with adolescents.
3. Analyze issues and disorders specific to adolescence and examine effective treatment modalities.
4. Apply evidence based practices in working with adolescents.
5. Analyze how adolescents are treated globally.

SW 420 Topics in Social Work

Reading and discussion, skill exercises or field experience related to social work theory, research, or practice. A specific topic selected each time offered. May be repeated.
3 Cr. Fall | DEMAND

SW 421 Child Welfare: Public-Private

Child welfare practice to assure child safety, permanency, and well-being.
Coreq.: NA 3 Cr. DEMAND

Student Learning Outcomes

1. Apply knowledge of social work theories to engage, assess, and intervene with children and families to assure child safety, permanency and well-being.
2. Examine societal values as they impact attitudes, expectations, and policy development for child safety, permanency, well-being, and family capacity to care for children.
3. Examine the role of historical, current, and evolving major U.S. policies impacting current child welfare practice and service delivery systems.
4. Synthesize the role and interaction of poverty, race, ethnicity, interpersonal and societal violence, trauma, and human and family development on children and families as it impacts children, families, and their communities related to child safety, permanency and well-being.
5. Examine the types of child maltreatment and intervention approaches through various service systems including child protection, foster care, courts, and community.
6. Apply evidence-based practices incorporating utilization of the continuum of supportive, supplemental, and substitute services available to children and families.
7. Develop skills for culturally appropriate engagement, assessment, and intervention with children and families from all types of family structures.

SW 430 Social Work Practice with the Aging

Social services related to aging including practice settings, skills, values, social policy and research.
3 Cr. DEMAND

SW 442 Professional Development

Preparation of students for field placement and professional life, including objectives, roles and responsibilities in social work practice.
Prereq.: SW 195, SW 330, SW 340, SW 350, SW 360, SW 410 Coreq.: SW 411 and SW 412 3 Cr. Fall | Spring

Student Learning Outcomes

1. To identify as a professional social worker and conduct oneself accordingly through the application of social work ethical principles and to apply critical thinking to inform and communicate professional judgements.
2. To demonstrate an understanding of the social worker's role in advancing human rights and social and economic justice, and engaging in diversity and difference in practice.
3. To be able to evaluate themselves on the 41 CSWE (Council on Social Work Education) practice behaviors upon which professional social work is based.
4. To exhibit an understanding of the primary theories of social work generalist practice as well as the social worker role in public policy.
5. To be able to practice the four areas of generalist practice including engagement, assessment, intervention, and termination/evaluation.

SW 444 Internship in Social Work

Extensive educationally directed social work field placement an in approved social agency. Arranged with the internship instructor one semester prior to the actual placement.
Prereq.: Completion of pre-professional core and admission to the social work major, SW 216, SW 330, SW 340, SW 345, SW 350, SW 360, SW 410, SW 411, SW 412, SW 443 Coreq.: SW 445 12 Cr. Fall | Spring

Student Learning Outcomes

1. Effectively problem solve ambiguous practice situations.
2. Apply ethical reasoning as determined by the NASW and unitize in practice settings.
3. Effectively communicate and negotiate with a practice setting supervisor and staff.
4. Analyze, apply, and evaluate intervention strategies in practice settings.
5. Evaluate practice empirically and use data for further growth.

SW 445 Field Practicum Seminar

Integration of knowledge from field practicum and classroom. Ethics and values of the profession. Culmination of Diversity/Empowerment Portfolio project.
Prereq.: Completion of pre-professional core and admission to the social work major, SW 216, SW 330, SW 340, SW 345, SW 350, SW 360, SW 410, SW 411, SW 412, SW 443 Coreq.: SW 444 3 Cr. Fall | Spring

Student Learning Outcomes

1. Effectively problem solve ambiguous practice solutions.
2. Analyze appropriate ethical decisions as determined by the NASW.
3. Analyze, apply, and evaluate intervention strategies used in practice settings.
4. Evaluate practice empirically and use data for further growth.
5. Report, analyze, and advise on practice dilemmas.

SW 475 Field Work

Supervised field experience in a social service agency, correctional institution, or other approved facility. Admission by department approval.
3 Cr. DEMAND

Software Engineering (SE)

SE 101 Ethics and the Engineering Profession

Major ethical theories; sources of ethics; professional responsibilities; social impact of software engineering ethics; teamwork skills; design; software engineering careers
3 Cr. Fall

Student Learning Outcomes

1. Identify the major ethical theories and sources of ethics 2. Identify the professional ethics codes and the impact of ethics in the software engineering profession 3. Apply teamwork skills in order to overcome the challenges of multidisciplinary and/or multicultural software projects.
4. Integrate ethical theories in various engineering fields and associated responsibilities to facilitate the choice, study, and success of their software engineering careers

SE 210 Operating Systems and Applications

Operating systems design, concurrent processes, inter-process communication, synchronization, scheduling, resource allocation, and memory management. Mobile operating systems (Android and iOS) and their ancestors - Linux and OS X.
Prereq.: CSCI 201 Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Define the basic structure and function of an operating system 2. Identify the similarities and differences between desktop operating systems and mobile operating systems 3. Define the basics of memory management

SE 211 Introduction to Database Systems

Database management, design, and implementation. Database theory, data modeling, relational model concepts, data normalization, relational algebra, Structured Query Language (SQL), database design. Use of conventional Database Management Systems (DBMSs) and modeling tools.
Prereq.: CSCI 201 Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Define database concepts and theories 2. Apply data modeling techniques 3. Use relational algebra notation and apply it to construct SQL instructions
4. Design normalized relational databases 5. Use common Database Management Systems and modeling tools

SE 221 Introduction to Computer Networking

Design and management of computer networks. Servers, routers, bridges, gateways, transmission

media, communications protocols, network security, and performance tuning.
3 Cr. Fall

Student Learning Outcomes
1. Identify standard communication reference models including: physical layer, data link layer, network layer, transport layer, session layer, presentation layer, and application layer 2. Describe the client-server architecture and identify its characteristics 3. Identify common standard protocols including: IP, TCP, UDP, ARP, ICMP, DHCP 4. Differentiate between peer-to-peer and client/server network designs 5. Identify various networking components such as routers, hubs, firewalls, bridges, and switches

SE 231 Introduction to Computer Security
Computer security and applied cryptography, software vulnerability analysis, defense, exploitation, reverse engineering, networking and wireless security.
Prereq.: SE 221 3 Cr. Spring

Student Learning Outcomes
1. Identify the basic concepts in information security, including security threats, security models, and security mechanisms.
2. Explain applied cryptography concepts.
3. Identify the concepts of malicious code and data management and exchange 4. Identify common vulnerabilities in computer programs 5. Apply security algorithms for software development

SE 240 Introduction to Software Engineering
Software process models, software life-cycle (planning, requirements, design, construction, quality assurance, and maintenance), software security, Software Engineering Code of Ethics and Professional Practice.
Prereq.: CSCI 201 3 Cr. Spring

Student Learning Outcomes
1. Identify common software process models
2. Define formal requirements for a software system, based on needs of stakeholders.
3. Describe design principles and patterns in software development 4. Apply modeling diagrams and security techniques for software design
5. Implement a simple graphical user interface for a software system 6. Apply measurement techniques to assure the quality of software systems

SE 276 Introduction to Mobile Applications
Mobile application development frameworks; architecture, design and engineering issues, techniques, methodologies for mobile application development
Prereq.: CSCI 201 Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Evaluate technology and business trends impacting mobile applications 2. Evaluate and articulate the characterization and architecture of mobile applications.
3. Analyze enterprise-scale requirements of mobile applications 4. Apply common application development frameworks in order to design and develop mobile applications

SE 340 Undergraduate Research Methodology
Research topics in software engineering.
Prereq.: SE 240 1 Cr. Fall

Student Learning Outcomes
1. Apply the software engineering life-cycle.
2. Use appropriate software engineering process models.
3. Apply software engineering methodologies to solve real-world problems.

SE 341 Undergraduate Applied Research
Advanced software engineering practical work.
Prereq.: SE 340 1 Cr. Spring

Student Learning Outcomes
1. Conduct software analysis in an applied software research project 2. Evaluate software design for the software project 3. Construct and test the code
4. Use teamwork management skills in the project

SE 345 Software Engineering and Human Computer Interaction
Concepts of human-computer interaction, user-centered design, heuristic evaluation, and evaluation of software usability.
Prereq.: SE 240 Coreq.: Cr. Fall

Student Learning Outcomes
1. Evaluate common methods in the user-centered design process and the appropriateness of individual methods for a given problem.
2. Evaluate and apply classic design standards, guidelines, and patterns.
3. Apply appropriate design methods and evaluation methods at a basic level of competence to construct

prototypes 4. Assess the functional and interactive effectiveness of the prototypes at varying levels of fidelity

SE 412 Data Mining for Software Engineering

Mining interesting information from large data sets. Statistical analysis and machine learning, data mining concepts and techniques, data representation and their similarity/dissimilarity measures, data pre-processing, frequent pattern mining, supervised and unsupervised modeling.
Prereq.: CSCI 411, STAT 353 3 Cr. DEMAND

Student Learning Outcomes

1. Identify data mining concepts and technologies 2. Identify the different types of data, their statistical description, and similarity/dissimilarity measures 3. Apply basic data pre-processing techniques 4. Derive interesting patterns using frequent pattern mining techniques 5. Apply and predict future instances using supervised learning techniques (classification) 6. Apply cluster analysis techniques to group similar data (unsupervised learning) 7. Use a variety of data mining tools

SE 413 Big Data Organization and Management

Data analytics concepts and techniques. Big-data features and representations, data collection and sampling, predicative modeling, frequent patterns, social networks analysis, data benchmarking and privacy, data modeling and documentation.
Prereq.: CSCI 411, STAT 353 3 Cr. DEMAND

Student Learning Outcomes

1. Identify the characteristics of big data 2. Apply concepts of data collection, sampling, and pre-processing techniques 3. Apply predictive analysis techniques 4. Use descriptive analysis techniques, including association rules, sequence rules, and segmentation 5. Apply analysis to social networks 6. Evaluate benchmarking, data quality, privacy, software and model design and documentation

SE 444 Internship

Complete 450 hours working on software engineering projects in a professional environment.
Prereq.: SE 465 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Apply teamwork skills in an industrial setting 2. Apply software planning and management skills in an industrial setting 3. Apply appropriate software engineering process models in an industrial setting 4. Apply software engineering life-cycle in an industrial setting

SE 450 Software Reverse Engineering

Analyzing and understanding software, without access to source code or design documents. Deducing the design of a software component. Recovering specifications, discover data use, and analyzing software via disassembly and decompilation.
Prereq.: CSCI 201 Coreq.: Cr. Spring

Student Learning Outcomes

1. Define and explain the basics of software engineering systems 2. Identify key concepts related to re-engineering, forward engineering, and reverse engineering 3. Apply software reverse engineering methodologies and tools 4. Describe the legal issues governing the use of software reverse engineering techniques

SE 460 Software Analysis

Software requirements analysis, requirement specification, elicitation, verification and validation, quality assurance metrics.
Prereq.: SE 240 3 Cr. Fall

Student Learning Outcomes

1. Evaluate specification and elicitation of requirements using a variety of techniques 2. Summarize, organize and prioritize requirements 3. Apply analysis techniques such as needs analysis, goal analysis, and use case analysis 4. Validate requirements according to criteria such as feasibility, clarity, freedom from ambiguity 5. Represent functional and non-functional requirements for different types of systems using formal and informal techniques 6. Specify and measure software quality attributes

SE 465 Software Design

Formal methods of software analysis/design. Design patterns, standard middle-ware, software architecture including object/function oriented design. Design quality assurance management. Reverse engineering.
Prereq.: SE 345, SE 460 3 Cr. Spring

Student Learning Outcomes

1. Evaluate common design patterns, frameworks, and architectures 2. Analyze standard middle-ware technologies 3. Evaluate quality metrics as objectives for software designs, and then measure and assess

designs to ensure the objectives have been met 4. Modify software designs using change control approaches 5. Use reverse engineering techniques to recapture the design of software

SE 466 Game Development

Game design teams and processes, Game scripting and programming, Game data structures and algorithms, Artificial intelligence, Play testing
Prereq.: CSCI 201 3 Cr. DEMAND

Student Learning Outcomes

1. Discuss the basic history and genres of games 2. Analyze the overall game design process 3. Compare and contrast the design tradeoffs inherent in game design 4. Design and implement basic levels, models, and scripts for games 5. Apply the mathematics and algorithms needed for game programming 6. Design and implement a complete three-dimensional video game

SE 470 Software Quality

Quality assurance concepts and their role in software development. Planning, validation and verification, testing, configuration and delivery management.
Prereq.: SE 465 3 Cr. Spring

Student Learning Outcomes

1. Evaluate key components of software quality 2. Apply appropriate software validation and verification techniques 3. Design and implement a software test plan and perform unit, integration and system testing 4. Apply appropriate software metrics to ensure software quality 5. Apply diverse test coverage techniques 6. Use statistical analysis to evaluate defect probability

SE 475 Software Construction

Implementation and testing, state-based, table-driven, and low-level design of software. Design patterns and refactoring. Analysis of designs based on quality criteria, performance and maintainability improvement.
Prereq.: SE 465 3 Cr. Spring

Student Learning Outcomes

1. Apply a variety of software construction techniques and tools, including state-based and table-driven approaches to low-level design of software 2. Design simple languages and protocols suitable for a variety of applications 3. Generate code for simple languages and protocols using suitable tools 4. Create simple formal specifications of low-level software modules and check the validity of these specifications 5. Design simple concurrent software tools 6. Analyze software to improve its efficiency, reliability, and maintainability

SE 477 Mobile Application Development

Design of Mobile Applications. Mobile application frameworks, advanced mobile user-interface interactions involving sensors, event handling, data management and network communication.
Prereq.: SE 476 3 Cr. DEMAND

Student Learning Outcomes

1. Construct a mobile application using industrial strength programming language features and an application programmers interface with a associated toolchain targeted for mobile computing. 2. Design user interactive programs using state-of-the-art software design patterns. 3. Construct a mobile application using an appropriate framework targeting a problem domain specific to mobile applications. 4. Evaluate developer licensing agreements associated with distribution of mobile application software.

SE 478 Introduction to Enterprise Resource Planning Systems

Enterprise system integration, process management and workflow, supply chain management, customer relationship management.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze and evaluate the challenges of system integration 2. Evaluate issues of enterprise architecture, design, development, implementation, and project management 3. Apply related concepts, technologies, and trends in enterprise planning including forward, backward, and upward integration of the enterprise using supply chain management and customer relationship management.

SE 479 Information Technology Transformation

Technological and managerial aspects of information technology. Change management and transformation. Process review and risk management.
3 Cr. DEMAND

Student Learning Outcomes
1. Evaluate the impact of future IT innovations on their firm and industry.
2. Analyze key drivers of technology's impact on the business ecosystem.
3. Apply appropriate frameworks to categorize technological innovation and its impact along a variety of metrics including competitive environment, business model disruption, and supply chain structure.
4. Effectively communicate recommendations in both written and oral discourse

SE 480 Software Project Management
Use knowledge areas and develop procedures, skills, and resources for successful management of software projects.
Prereq.: SE 465 3 Cr. Spring

Student Learning Outcomes
1. Develop a comprehensive and realistic project plan for a significant development effort 2. Apply management techniques to projects that follow agile methodologies, as well as methodologies involve larger-scale iterations or releases 3. Apply estimates of costs for a project using several different techniques 4. Apply function point measurement techniques 5. Measure project progress, productivity and other aspects of the software process 6. Apply earned-value analysis techniques 7. Perform risk management, dynamically adjusting project plans 8. Use configuration management tools effectively, and apply change management processes properly 9. Evaluate software licenses, contracts, and intellectual property agreements, while recognizing the necessity of involving legal expertise 10. Use standards in project management, including project management quality and the software development process

SE 482 Computer Animation and Visualization
Computer animation logic and programming. Data representation and visualization. Motion capture technologies. Optimization and physical animation techniques.
Prereq.: CSCI 450 3 Cr. DEMAND

Student Learning Outcomes
1. Evaluate the principles of animation, 3D computer animation concepts and the production process 2. Use the appropriate technical expertise for 3D computer animation and data visualization 3. Synthesize and communicate design ideas visually in the form of 3D models 4. Construct the computer animation program of 3D models using appropriate tools and techniques

SE 490 Software Project I
First part of a group project/research course. Pursue projects or research with faculty adviser, within an area of Software Engineering.
Prereq.: SE 470, SE 475 Coreq.: SE 410 3 Cr. Fall

Student Learning Outcomes
1. Apply teamwork skills through the software engineering life-cycle 2. Gather software requirements through iterative communication with project stakeholders 3. Define a plan (one year plan) with the major milestones to analyze, design, and construct the software 4. Apply perspective or agile software engineering process model to analyze, design, construct, and deploy quality software

SE 491 Software Project II
Second of a full year, group project/research course. Students pursue projects or research, with a faculty adviser, within an area of Software Engineering.
Prereq.: SE490 3 Cr. Spring

Student Learning Outcomes
1. Apply teamwork skills throughout the software engineering life-cycle 2. Construct quality software using the software design document 3. Implement all functional and non-functional requirements described in the specifications and design

Sociology (SOC)

SOC 111 Social Problems [Goal 9] (Diversity)
Nature, origins, and types of social problems in contemporary society. Societal efforts to eliminate or alleviate these problems.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

SOC 160 Principles of Sociology
Human social interaction, including culture, groups, group and personality, group interaction, community, social institutions, cultural change, social disorganization.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

SOC 200 Environmental Sociology (Diversity)
Social aspects of environmental issues, emphasizing the importance of gender, race, and class to an

understanding of the human-environment relationship, and the social construction of environmental problems and solutions.
3 Cr. Fall | Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 10: ENVIRONMENTAL ISSUES

SOC 201 Social Inequality

Social structures and processes that maintain class, race, and gender inequality in the United States and globally. Collective action and public policies to reduce social inequality. Should be taken early in the major. Writing intensive.
Prereq.: SOC 111 or SOC 160 3 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze the structure of inequality in the United States based on socioeconomic class, race/ethnicity, gender, sexual orientation and other socially relevant characteristics.
2. Compare and contrast a variety of social theories explaining the creation and maintenance of social inequality.
3. Write clear, well-organized, well-supported arguments around a variety of topics related to social inequality.
4. Research and write a literature review related to a specific issue of social inequality.
5. Critically assess social inequality problems and propose social structural solutions to social inequality problems in their community and larger society.

SOC 211 Crime Myths and Media (Diversity)

Social myths about crime and violence, compares myths to existing research, focusing on myths related to race, gender, age, and type of crime. Institutions that perpetuate myths, purpose, consequences and global reach of myths.
3 Cr. Spring GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

SOC 268 Race and Ethnicity (Diversity/RIS)

Race and ethnic divisions, discrimination, conflict and cooperation. Impact of global processes on race and ethnicity in the United States. Comparison of US racial and ethnic patterns to other countries.
3 Cr. Fall | Spring GOAL AREA 7: RACIAL AND ETHNIC DIVERSITY IN THE U.S.

SOC 273 Sociology of Gender (Diversity)

Social construction of gender. Impact of social-economic constraints on gendered relations and how changes in socio-economic circumstances help transform or deconstruct gender.
3 Cr. DEMAND GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

SOC 276 Families and Globalization (Diversity)

Sociological perspective of diverse and emerging family patterns around the world in the 21st century, the interplay between globalization and families, and of challenges facing families and policy implications.
3 Cr. Fall GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 8: GLOBAL PERSPECTIVES

Student Learning Outcomes

1. Identify and apply sociological theory and methods to study families in the U.S. and around the world.
2. Explore and describe diverse family patterns both around the world and in the U.S.
3. Explain various family cultures, relations and problems in given historical, social, ecological and global context.
4. Reflect on how the study of families in this and other cultures and at different historical periods helps the students understand their own families.
5. Critically examine alternative family theories applying in different family systems shaped by larger social forces.

SOC 302 Social Theory

The development of the discipline of sociology and contemporary sociological theory as a guide to sociological research; macro-level theories.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Fall | Spring

SOC 303 Research Methods

Design, data gathering, data analysis, derivation of conclusions, writing of reports.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Fall | Spring

Student Learning Outcomes

1. Compare and contrast the types of methodological approaches that are particularly relevant to sociological practice.
2. Identify and use the ethical issues listed in the code of ethics of the Association for Applied and Clinical Sociology, the American Sociological Association, and/ or other relevant professional association.

3. Complete one research report or design.
4. Use computer hardware and software to conduct online library searches, to conduct web searches, to enter information into databases, and to analyze statistical and narrative data.
5. Describe, compare, and critique a wide range of research methods.
6. Articulate and critically assess research questions by scholars.
7. Identify and describe major patterns in statistical and narrative data.

SOC 304 Social Statistics

Statistical tools for problems in sociological research, presentation and interpretation of quantitative data; univariate and bivarite, descriptive, and inferential techniques.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and describe major patterns in quantitative data.
2. Critically evaluate the usefulness and limitations of quantitative data analyses.
3. Apply statistical techniques in analyzing quantitative data.
4. Use computer software to conduct to enter quantitative data and to conduct analyses.
5. Describe how data can be used as the basis for examining issues and making recommendations to clients.

SOC 310 Social Interaction

Interaction in small groups and larger collectivites. Observation of interaction patterns in public places.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. DEMAND

Student Learning Outcomes

1. Use a micro-sociology approach to analyze public social interaction.
2. Apply symbolic interactionism and social constructionism to explain how meaning is co-created.
3. Describe the sociological perspectives on language and communication.

SOC 345 Political Sociology

Structural and ideological factors influencing development and legitimation of political institutions and the sociological analysis of political processes.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. DEMAND

SOC 350 Sociology of Age and Aging

Age status in the U.S. The social status and roles of older adults.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze the social aspects of aging including social status and roles, family relationships, and long-term care issues.
2. Evaluate current issues and social policies.
3. Identify and apply major theoretical frameworks, concepts, methods and research addressing social aspects of aging.
4. Critically analyze how social institutions and processes affect aging and quality of life.
5. Identify and evaluate implications of an aging population for society.

SOC 355 Sociology of Women and Work

Impact of sociological position and social values on women in the work world in industrial society.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. DEMAND

Student Learning Outcomes

1. Identify social and structural indicators of gender inequality in the workplace.
2. Describe some of the causes of gender inequality in the workplace.
3. Evaluate the effects of work and family policies on gender in the work.
4. Discuss ways in which gender intersects with race and sexuality in the workplace.
5. Describe ways in which globalization affects men and women in the workplace.

SOC 362 Social Change

Change in interpersonal relationships and in societal institutions.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. DEMAND

Student Learning Outcomes

1. Analyze the theoretical perspectives, directions, processes, patterns and consequences of social change.
2. Examine and evaluate the factors and policies that stimulate or hinder the acceptance of change.
3. Identify and apply major theoretical frameworks, concepts, methods and research addressing the social change.
4. Critically analyze how social institutions and processes affect social change and quality of life.

5. Identify, evaluate, and explore the unintended consequences and cost of both planned and unplanned change for society.

SOC 365 Social Psychology

Symbolic interactionism. Socialization, self, social interaction, communication, and deviance.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe fundamental concepts in social psychology and specify how these concepts operate in daily life.
2. Use social psychology theory and research findings to analyze and solve contemporary social problems.
3. Employ contemporary social psychology processes to describe basic ideas of historical and contemporary theories.
4. Identify and explain methods used in social psychology to answer research questions.
5. Analyze the difference between sociological and psychological approaches to the field of social psychology.

SOC 366 Juvenile Delinquency

Definition, extent, and distribution; theories of causality and methods of treatment of juvenile delinquency.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Spring

Student Learning Outcomes

1. Patterns and myths of delinquency.
2. Distinguish a sociological perspective of delinquency from other perspectives.
3. Evaluate prevention, integration, and correction programs for deviant youth.
4. Appraise the contributions of social institutions in contributing to delinquency.
5. Apply best practices to solve a local problem facing youth.

SOC 367 Criminology

Definition, extent and distribution, theoretical intepretations of causality, and methods of treatment of criminal behavior.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Fall

Student Learning Outcomes

1. Students will examine how crimes are defined and measured.
2. Students will examine how law and inequality are related.
3. Students will analyze major theories of crime.
4. Students will categorize types of crimes and profiles of offenders.
5. Students will evaluate existing policies, practices, and programs regarding crime and society's response to crime.
6. Students will use verifiable knowledge to examine crime, offenders, and policies.

SOC 368 Social Deviance

Social deviance, deviant acts, attributes and beliefs.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Fall

Student Learning Outcomes

1. Identify various typologies of deviance.
2. Compare and critique various theoretical perspectives on deviance.
3. Examine the process of creating and performing deviant identities.
4. Identify and analyze various forms of social control.
5. Examine the ways that individuals have agency, resist stigma, and create meaning of their experiences.

SOC 374 The Sociology of Family Violence

Research and theory on family violence as an emergent social problem. Child, spouse, and parental abuse and examinations of possible societal solutions.
3 Cr. DEMAND

Student Learning Outcomes

1. Identify the range of behaviors that are included in the topic of family violence.
2. Demonstrate a sociological perspective towards family issues and violence.
3. Examine evidence on controversies in the field of family violence.
4. Synthesize information about specific areas within family violence and illustrate this knowledge through various electronic formats.
5. Identify the factors (individual, interactive, organizational, structural) that encourage or fail to discourage family violence in society.
6. Compare and contrast the distinct voice of feminists in the family violence literature and how

sociological research supports or challenges feminist assertions about the roots of family violence and how feminists challenge sociological assumptions about the roots of family violence.
7. Examine the ways that individuals have agency, resist violence, and create meaning of their experiences.
8. Evaluate social responses to family violence.
9. Apply theories of family violence to cases.

SOC 389 Wealth and Power in America

The interrelations and consequences of wealth, business, and politics in the United States.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Fall | DEMAND

SOC 400 Special Problems in Sociology

A seminar for advanced students wishing to work out a special problem in sociology.
Coreq.: 1-4 Cr. DEMAND

Student Learning Outcomes

1. Choose one special problem to study in depth.
2. Synthesize knowledge on the special problem.
3. Report on the special problem in an appropriate format.

SOC 412 Self and Society

Nature, origins, development, maintenance, and change of self. Relationships between self and social situations, social interactions and social worlds.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. DEMAND

Student Learning Outcomes

1. Use symbolic interaction theory to analyze the social development and presentation of the self.
2. Compare and contrast differences in the self across social situations, across history, and cross-culturally.
3. Identify and describe ways in which change in social structure relates to change in the self.

SOC 418 China and Globalization

3 Cr. DEMAND

Student Learning Outcomes

1. Identify and describe China's market-oriented reforms of the early 21st Century that have shaped and been impacted by the social consequences of globalization.
2. Situate Chinese societies in broad, multi-faceted, and dynamic global social contexts.
3. Analyze alternative trajectories and global views of social development via study of the Chinese case.
4. Analyze shared challenges facing Chinese citizens and those from other societies around the globe.
5. Use sociological concepts and tools to assess different social policies and developmental strategies in response to the impact of globalization on present-day Chinese society.

SOC 444 Internship

A maximum of 6 credits may be used toward a major; 3 credits used toward a minor, remainder may be used in general electives. Sociology major or minor only.
Coreq.: 6-15 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Apply sociological theories to a practice experience.
2. Illustrate how research methods can be used in a practice setting.
3. Identify the individual, group, and/or organizational processes within a specific practice setting.
4. Practice professional norms and demonstrate appropriate behavior with regard to work assignments.
5. Identify the influence of the student's personal values and perceptions as related to other individuals and groups in the practice setting.
6. Operate as an effective member of a work team or group in a specific practice setting.
7. Integrate their academic knowledge with their practice experience to acquire and use a professional identity as a sociological practitioner.
8. Analyze the social, political, and ethical constraints on sociological practice.

SOC 455 Sociology of Work

Changing nature of U.S. and global workforce social meaning and organization of work. Links between workplace relations and social inequality.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. DEMAND

SOC 456 Complex Organizations

Formal and informal organizational structures, processes, and behavior. Power, conflict, roles, values, and culture in corporations and bureaucracies.
Prereq.: Any sociology course or permission 3 Cr. Even Fall

Student Learning Outcomes

1. Identify and apply current theories, methods and research addressing complex organization.
2. Use sociological theories and concepts to analyze current policies and trends in complex organization.
3. Evaluate the social impacts of complex organizations on our society.
4. Critically evaluate how social institutions and processes affect the structure, process, and outcome of complex organization.
5. Apply sociological concepts and theories to specific complex organization problems.
6. Understanding group processes and decision making.

SOC 460 Social Practice and Policy

Evaluation of policies and social change practices employed to address social problems. Each year may have a different focus. Social movements, community organizing, and other challenges to power structures at the meso level. Includes a practice component.
Prereq.: Any sociology course 3 Cr. Even Spring

SOC 462 Seminar

Evaluation of sociological theory, social issues, or contemporary events. A specific topic selected each time offered. May be repeated.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 Coreq.: 1-3 Cr. DEMAND

SOC 467 Sociology of Religion

Religion from the perspective of classical and contemporary sociological theory, secularization, religion as a social institution, ideology, construction of social meaning, and alienation.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate a sociological understanding of religion as a social institution.
2. Critically examine the theoretical perspectives on the role of religion and religious institutions.
3. Critically examine the sociological significance of our own perspectives related to religion an religious institutions.
4. Sociologically examine how religion and religious institutions are impacted by capitalism in the US and globally.

SOC 468 Inequality in the Capitalist World System

Minority/subordinate group formation, stratification and interaction in the capitalist world system.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. DEMAND

SOC 472 Sociology of Family

Roles and relationships within the family, household structures, marriage/partnership patterns; changing patterns of the family and its relationships with other social institutions; policy implications.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Fall

Student Learning Outcomes

1. Apply in-depth theories and methods in addressing various aspects of family life and issues.
2. Identify micro and macro forces that jointly shape particular patterns of family life.
3. Exercise research and analytical skills through experiential learning.
4. Evaluate policy implications based on critical sociological analyses and family-society relations.

SOC 473 The Sociology of Sexualities

Multiple theories to explore sexualities and the ways in which they are socially constructed and controlled by social structures in societies.
3 Cr. Spring

Student Learning Outcomes

1. Develop a sociological understanding of sex and sexualities in a global context.
2. Critically examine theoretical perspectives on sexualities.
3. Critically examine the significance of our own perspectives related to sexualities.
4. Critically examine how sexualities are impacted by other social constructs.

SOC 474 Culture and Family

Family structure and dynamics in Non-Western countries. Cultural variations, historical and contemporary family patterns, relationship of family to other institutions, comparisions of Non-Western and Western families.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Describe various cultural patterns of family life and relations in non-Western societies.
2. Analyze family patterns and processes in given

cultural, historical, structural, and global context.
3. Critically evaluate existing social theories and methods when applied to non-Western societies.
4. Exercise research and analytical skills through experiential learning.

SOC 475 Sociology of Health and Illness

Sociocultural aspects of illness, health, treatment and, health care delivery, and the social organization of health care.
Prereq.: SOC 111, SOC 160, SOC 177, SOC 195, SOC 200, SOC 201, SOC 268, SOC 273 3 Cr. Fall

Student Learning Outcomes

1. Identify and apply current theories, methods and research addressing health and illness.
2. Use sociological theories and concepts to analyze current policies and trends in health policy.
3. Evaluate the social aspects of health and illness.
4. Critically evaluate how social institutions and processes affect health and quality of life.
5. Apply sociological concepts and theories to a specific health problem.

SOC 478 Advanced Statistics and Practice

Multivariate statistical analysis utilizing statistical software programs to understand complex social issues.
Prereq.: SOC 304 3 Cr. DEMAND

SOC 480 Sociological Practice

Capstone seminar for Applied Sociology majors. Uses of sociological theory, concepts, methods, and findings in careers related to sociology. Ethics, career preparation, and the relationship of sociological practice to academic sociology. C or better required to pass the Upper Division Writing Requirement.
3 Cr. Fall

SOC 482 Sociology and the Global Politics of Food

Examines the sociological and political dimensions of food. The processes of food production, distribution, and consumption and how these processes relate to structures of power and inequality.
3 Cr. Fall

Student Learning Outcomes

1. Understand the social meanings and the structural relations of power regarding the production, distribution, preparation and consumption of food.
2. Develop a sociological understanding of the structure of a globalized, industrialized agriculture and food system and the impacts on farmers, consumers and communities.
3. Understand the organization of a global food system that links the production and consumption of food; particularly how it generates abundance for some and famine for others.
4. Acquire knowledge of current responses to social problems regarding food and agriculture.
5. Understand how sociological concepts, theories, methods, and findings can be applied to the study of food.
6. Gain an appreciation for the value of sociology and sociological perspectives in examining the world.
7. Gain an appreciation for the multiple ways in which sociology can be applied.

SOC 488 Senior Seminar in Sociology

Capstone seminar on the value of the sociological perspective; relationships among subareas, among sociology and other disciplines, between academic sociology and sociological practice; and career preparation. C or better required to pass the Upper Division Writing Requirement.
Prereq.: Any sociology course or permission 3 Cr. Spring

SOC 498 Practical Research and Writing

Engage students in action research, evaluation research, discourse analysis, participatory research models in the community. May include grant writing, grant reports, executive summaries, needs assessment, evaluation research, policy proposals or other practical research and writing experiences.
3 Cr. Odd Spring

Student Learning Outcomes

1. Combine sociological research with social activism/social change efforts, such as grassroots/community organizing, service provision, policy changes, resource mobilizing, etc. Action research/participatory research.
2. Implement research strategies used most often in community organizations, such as needs assessment and evaluation research and the consequences of working within organizations/instititions.
3. Write professional reports of research based on the population they are serving.
4. Use best practices for grant writing, professional solicitations for funds, creating brochures and outreach materials, policy analysis, and professional presentations depending on the audience they are working with in the community.
5. Apply critical methods such as discourse analysis,

semiotic analysis, etc., to help them situate cultural forms within the power structures of society and how to use research to expose those power relationships.
6. Situate practical or applied oriented work within a body of sociological literature and theory.

Soviet Studies (SOV)

SOV 100 Introduction to Soviet and Eurasian Studies (Diversity)

Introduction to the Soviet Union and the successor Eurasian states, including geography, history, politics, society, economics, culture, foreign policy and contemporary issues.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify major geographic features and historical events of the Soviet Union and the successor Eurasian states.
2. Analyze contemporary political and economic issues in the Soviet Union and the successor Eurasian states.
3. Describe major cultural and social achievements in the Soviet Union and the successor Eurasian states.

SOV 420 Contemporary Policy Issues in Soviet and Eurasian Studies

Policy-oriented analysis of key issues facing the former Soviet Union and the succdessor Eurasian states. Emphasis on Soviet and successor understanding of issues, policy options, approaches to implementation. Topics vary.
3 Cr. Spring

Spanish (SPAN)

SPAN 100 Spanish for Health Care Professionals

Basic Spanish for work in the field of medicine and health care. Conversational and written skills to deal with medical situations. Cultural aspects of medicine in different Spanish-speaking countries. May include a community-based service learning project. Previous experience with Spanish recommended but not required.
3 Cr. DEMAND GOAL AREA 8: GLOBAL PERSPECTIVES

Student Learning Outcomes

1. Use and understand Spanish vocabulary and expressions related to basic health care occupations.
2. Use basic Spanish to communicate effectively with patients.
3. Recognize cultural expressions and communicate respect for cultural differences.
4. Assist Spanish-speaking people in a health care environment.
5. Identify diverse segments of Spanish-speaking populations.
6. Recognize cultural norms that affect the doctor-patient relationship.

SPAN 101 Elementary Spanish I

Vocabulary, grammatical structures and an introduction to the cultures of the Spanish-speaking world. Emphasis on the spoken language, some reading and writing. Promotes understanding and appreciation of the cultures of the various Spanish-speaking countries.
4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

SPAN 102 Elementary Spanish II

Vocabulary, grammatical structures and an introduction to the cultures of the Spanish-speaking world. Emphasis on the spoken language, some reading and writing. Promotes understanding and appreciation of the cultures of the various Spanish-speaking countries. Intended for students who have successfully completed SPAN 101 or the equivalent.
4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

SPAN 103 Accelerated Spanish for High Beginners

An accelerated course that combines SPAN 101 and SPAN 102 in one semester. Basic listening comprehension, speaking, reading,and writing are stressed in that order. Intended for advanced beginners, students who have some previous experience but who feel they are not ready for SPAN 201.
4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

SPAN 110 Introduction to Spanish Speaking Cultures

Diverse cultural, historical, and socio-political features of Spanish speaking cultures and basic Spanish through film and music. Recommended companion course to 101 and 102. Taught mainly in English. For students who want more contact with modern culture and less emphasis on language.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

SPAN 201 Intermediate Spanish I

Review and extend the skills of listening, reading, speaking, and writing for purposes of communication using a variety of technological learning aids. Directed toward linguistic and cultural awareness. Special emphasis on extension and application of listening and reading skills strategies using various authentic sources.
Prereq.: SPAN 102, SPAN 201 4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

SPAN 202 Intermediate Spanish II

Review and extend the skills of listening, reading, speaking, and writing for purposes of communication using a variety of technological learning aids. Directed toward linguistic and cultural awareness. Special emphasis on extension and application of listening and reading skills strategies using various authentic sources.
Prereq.: SPAN 102, SPAN 201 4 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS | GOAL AREA 8: GLOBAL PERSPECTIVES

SPAN 221 Spanish for Heritage Speakers

Designed to help students advance to the intermediate proficiency level. Continued practice in developing speaking, listening, reading and writing skills needed in the second and third year. Oral communication emphasized. May be taken with SPAN 201, SPAN 202 or SPAN 300 level courses.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Write using more academic Spanish grammar and sentence structures.
2. Identify cultural, social and linguistic differences in Spanish-speaking countries.
3. Converse in Spanish about everyday topics at the intermediate-low level.
4. Read intermediate-level texts in Spanish.
5. Listen, interpret, and speak full-speed spoken Spanish.
6. Describe how Spanish affects the context of a global community.

SPAN 222 Oral and Written Proficiency in Spanish

Designed to help students advance to the intermediate proficiency level. Continued practice in developing speaking, listening, reading and writing skills needed in the second and third year. Oral communication emphasized. Taken with SPAN 201, SPAN 202 or SPAN 300-level courses.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Write using more complex Spanish grammar and sentence structures.
2. Distinguish cultural, social and linguistic differences in Spanish-speaking countries.
3. Converse in Spanish about everyday topics at the intermediate-low level.
4. Read intermediate-level texts in Spanish.
5. Comprehend full-speed spoken Spanish.
6. Understand Spanish in the context of a global community.

SPAN 310 Spanish Grammar Texts Contexts

Written practice based on themes drawn from films and texts from Spanish-speaking countries; review and practice of grammar. Directed toward increasing fluency and accurate expression in Spanish writing. Repeatable up to 9 credits with different topics.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify, compare and contrast grammatical structures in authentic texts.
2. Apply advanced structures in writing.
3. Explain language as a system.
4. Analyze language in context.
5. Analyze textual meaning through linguistic structures at the intermediate-mid level according to the ACTFL scale.

SPAN 330 Teaching Spanish in U.S. Secondary Schools

Guided observation of teaching strategies/techniques appropriate to beginning Spanish classes in U.S. secondary schools. For native speakers of Spanish with minimal experience in U.S. secondary schools. May substitute for Span 301 in BS major/minor program, with approval of B.S. adviser.
3 Cr. DEMAND

SPAN 331 Introduction to Literary Studies

Analysis of the principal literary periods, movements and genres of Spanish and Spanish-American literature. Must be taken concurrently with 301 or 302 and before any 400-level course.
Prereq.: SPAN 202, SPAN 220 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify and describe key movements of Hispanic literature.
2. Explain the socio-historical, political and other cultural contexts of distinct Hispanic literary movements.

3. Analyze important works of Hispanic Literature.
4. Summarize and paraphrase content of important works of Hispanic Literature.
5. Compare styles and themes of varied works and movements of Hispanic literature.

SPAN 341 Culture and Civilization

Integrates language, history, geography and culture to present a comprehensive view of life in 21 countries where Spanish is spoken. Must be taken concurrently with 301 or 302 and before any 400-level course.
Prereq.: SPAN 202, SPAN 220 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify the location of all Spanish-speaking countries and describe their main geographical features and climates.
2. Identify the diverse ethnicity of the Spanish-speaking world and describe how that diversity manifests itself in those distinct cultures.
3. Compare important cultural achievements of diverse areas of the Spanish-speaking world.
4. Analyze how diverse political and social phenomena impact the cultures of the Spanish-speaking world in unique ways.
5. Interpret information from a variety of authentic cultural sources and perspectives and summarize that information in both written and oral Spanish.

SPAN 345 Oral Communication Skills through Media

Written and oral practice based on themes drawn from the media about the contemporary culture of Spanish-speaking countries; review and practice of grammar. Directed toward fluency and accurate oral expression. Repeatable up to 9 credits with different topics.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Express views orally of and reactions to the issues presented in the course.
2. Compare and contrast different perspectives.
3. Describe and analyze socio-cultural issues.
4. Produce spoken language at the intermediate-mid level according to the ACTFL scale.

SPAN 421 Literary Periods and Authors

Topics vary: Analysis and discussion of major periods from Medieval to Contemporary literature and-or authors from Iberia and-or Latin America. May be repeated up to 6 credits.
3 Cr. DEMAND

Student Learning Outcomes

1. Recognize, analyze and discuss the historical and cultural context of major literary movements, periods and authors in Spanish and-or Latin American literature.
2. Analyze and discuss major works of Spanish and-or Latin American literature in speaking and writing in Spanish.
3. Demonstrate intermediate-high speaking proficiency in Spanish as identified by the ACTFL Proficiency guidelines.
4. Comprehend, interpret and evaluate information received in Spanish through reading and listening at a level that results from demonstrating the speaking proficiency.

SPAN 422 Genres and Themes in Spanish Literature

Topics vary. Analysis and discussion of genres and/or themes from Iberian and/or Latin American literature ranging from Medieval to Contemporary Literature. May be repeated up to 6 credits
3 Cr. DEMAND

Student Learning Outcomes

1. recognize, analyze and discuss the historical and cultural context of major literary genres and themes in Spanish and Latin American literature.
2. analyze and discuss major works of Spanish and Latin American literature in speaking and writing in Spanish.
3. demonstrate intermediate-high speaking proficiency in Spanish as identified by the ACTFL Proficiency guidelines.
4. comprehend, interpret and evaluate information received in Spanish through reading and listening at an intermediate-high speaking proficiency.
5. compare and contrast genres and themes from major literary movements, periods and authors in Spanish language literature.
6. demonstrate writing proficiency at the intermediate-high level as identified by the ACTFL Proficiency guidelines.

SPAN 441 Historical Topics in Culture

Topics vary: Analysis and discussion of the social and cultural context and the impact of major historical events in Spain and/or Latin America, ranging from the Medieval period through the 20th century. May

be repeated up to 6 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Recognize, analyze and discuss the historical and cultural context of major historical events in Spain and or Latin America.
2. Analyze and discuss the impact of major events in Spain and or Latin America.
3. Demonstrate intermediate-high speaking proficiency in Spanish as identified by the ACTFL Proficiency guidelines.
4. Interpret and evaluate information received in Spanish through reading and listening at a level that results from demonstrating the speaking proficiency.
5. Compare and contrast major events in Spain and or Latin America with events from their own history and experience.
6. Demonstrate writing proficiency at the intermediate-high level as identified by the ACTFL Proficiency guidelines.

SPAN 444 Internship
Use linguistic ability in work setting in the US or in the host country. Combines learning with an apprenticeship experience.
Prereq.: Permission of instructor/advisor. Coreq.: 2-4 Cr. DEMAND

SPAN 445 Contemporary Topics in Culture
Topics vary: Analysis and discussion of contemporary events in Spain and or Latin America and their historical and socio-economic contexts, as well as their impact on the rest of the world using a variety of authentic media sources. May be repeated up to 6 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Recognize, analyze and discuss the historical and cultural context of major contemporary events in Spain and or Latin America in speaking and writing in Spanish.
2. Analyze and discuss the impact of major events in Spain and or Latin America on the rest of the world while speaking and writing in Spanish.
3. Demonstrate intermediate-high level of speaking proficiency in Spanish as identified by the ACTFL Proficiency guidelines.
4. Interpret and evaluate information received in Spanish through reading and listening at an intermediate-high level of speaking proficiency.
5. Compare and contrast contemporary events in Spain and/or Latin America with events from their own history and experience.
6. Demonstrate writing proficiency at the intermediate-high level as identified by the ACTFL Proficiency guidelines.

SPAN 453 Topics in Spanish Linguistics
Fundamental principles of Spanish linguistics, including phonetics, phonology, syntax, morphology, sociolinguistics, pragmatics, and or history of the language. Required course for Spanish BS students.
Prereq.: ENGL 361 3 Cr. DEMAND

Student Learning Outcomes
1. Explain the Spanish language as a system 2. Write phonetic analyses using standard phonemes and allophones in different environments.
3. Contrast the Spanish and English sound systems.
4. Demonstrate advanced-low level of Spanish pronunciation.
5. Demonstrate Spanish suprasegmentals including syllable, stress, and intonation.
6. Articulate the major differences between Peninsular and American dialects.
7. Identify, analyze and use correct morphology and syntax in writing and speaking Spanish.
8. Explain the verbal system in Spanish (including mood, aspect and tense).
9. Explain the pronominal system in Spanish.
10. Identify, analyze and use correct principles from pragmatics and sociolinguistics in writing and speaking Spanish.

SPAN 454 Teaching Spanish in the Secondary School.
Taken concurrently with student teaching. Application of language learning principles in secondary schools. Selection and presentation of daily and unit lessons. Critique based on the theories discussed in LC 461 and LC 462. BS capstone course. Cannot be used as an elective in a BA program.
Prereq.: LC 461 and LC 462 2 Cr. DEMAND

Student Learning Outcomes
1. Produce and evaluate sample lesson plans appropriate for secondary school.
2. Apply linguistic and intercultural techniques appropriate to age and language level of students during clinical experience.
3. Develop meaningful lesson plans for field experience, apply linguistic and intercultural techniques, demostrate awareness of assessment tools following standards of language proficiency.

4. Develop a professional portfolio at the end of clinical experience, including own materials, class observations by teacher supervisor, colleagues and academic supervisor.
5. Discuss and describe teaching experiences with teaching supevisor and academic supervisor on a regular basis during experience.

SPAN 456 Teaching Spanish in the Elementary School

Application of language learning principles to elementary school instruction.
Development/selection of materials and practice in presenting them. BS Capstone course; cannot be used as an elective in BA program.
Prereq.: FORL 455/555 2 Cr. DEMAND

Student Learning Outcomes

1. Produce and evaluate sample lesson plans appropriate for elementary school instruction.
2. Develop lesson plans which involve a variety of skills and learning styles.
3. Reflect on and describe skills required to complete tasks relevant to the teaching assignments.
4. Develop meaningful lesson plans that incorporate and demonstrate linguistic proficiency and cultural awareness.
5. Describe and apply Second Language Acquisition theory and practice in creation of lesson plans.

SPAN 457 Senior Seminar (B.A.)

Research-based project on selected topics in Spanish literature, linguistics, or culture under the guidance of instructor. Should be taken during the last academic year of the major. May include a service learning opportunity.
2 Cr. DEMAND

Student Learning Outcomes

1. Identify, describe and analyze (a) cultural, social or literary issue(s) pertaining to the culture in Spanish-speaking countries in a research paper that demonstrates at least Intermediate-High level of written proficiency according to the ACTFL scale.
2. Interpret and summarize information and develop perspectives through the use of authentic literature and materials from the Spanish-speaking world.
3. Formulate a thesis pertaining to (a) cultural, social issue(s) or topics in Spanish-speaking countries and compare and contrast various perspectives of the issue or topic.
4. Evaluate and interpret information pertaining to (a) cultural, social issue/s in the Spanish-speaking world.
5. Evaluate their own language with regard to grammar, stylistics and pragmatics, and accurately communicate the interrelationships of language and culture and understand that cultural knowledge and understanding are interdisciplinary.

SPAN 460 Study Abroad

On-site study of selected aspects of language and/or culture of the host country. Final report presented in Spanish.
Prereq.: SPAN 301, SPAN 302 3 Cr. DEMAND

Student Learning Outcomes

1. Engage in community sites and observe and describe the cultural and social environment in the host country.
2. Respond critically to works of cultural artifacts and products.
3. Investigate, interpret and describe social, historical and cultural values, products and behaviors experienced and/or observed while engaging in small group projects during the experience abroad.
4. Describe and analyze cultural experiences in personal reflective journals.
5. Design and compile a portfolio that represents and describes especially formative cultural and linguistic experiences during education abroad.

SPAN 461 Internship

Use linguistic ability in work setting in the US or in the host country. Combines learning with an apprenticeship experience. May substitute for 457.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Negotiate and engage in activities within the settings of the workplace in Spanish-speaking contexts in US or in Spanish-speaking countries with an acceptable level of Spanish linguistic proficiency.
2. Compile and organize a professional portfolio with all relevant aspects of the experience.
3. Reflect on and describe the skills required to complete tasks relevant to the position, keep a journal of experience and a portfolio of evaluation by supervisors.
4. Engage in and negotiate the activities that occur within the settings of the workplace in Spanish-speaking contexts in US or in Spanish-speaking countries in a way that demonstrates intercultural competence and awareness.

5. Summarize, describe and evaluate improvement in cultural and linguistic proficiency as a result of the internship.

SPAN 471 Commercial Spanish

General business terminology within a business and cultural context. Preparation for a business career in a global market.
Prereq.: SPAN 302, SPAN 331, SPAN 341 3 Cr.

Student Learning Outcomes

1. Analyze business and commercial content in terms of appropriate cultural awareness.
2. Create sample commercial correspondence with appropriate vocabulary.
3. Evaluate commercial correspondence from several distinct cultural contexts within the Spanish-speaking world.
4. Articulate appropriate register and tone in commercial correspondence.
5. Identify appropriate business and commercial vocabulary in a range of commercial and cultural contexts.

Special Education (SPED)

SPED 200 Introduction to Education

Introduces students to the broad field of education including focus on children and families, the role of the teacher, the role of schools and educational programs in communities and the broader society, history and philosophy of education, educational futures, teacher education knowledge base, and contemporary issues. Same as CFS/ED 200.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the history of the U. S. educational system and how its philosophy has changed and evolved since its inception.
2. Define the role of a teacher as a public employee and the responsibility for obtaining and maintaining licensure.
3. Articulate the role of schools as an organization within the larger community context.
4. Identify the relevant aspects of the systems within which the teacher operates.
5. Evaluate how curricular emphases differ within the context of cultural and global changes.
6. Identify student rights and teacher responsibilities to obtain equal and appropriate educational opportunities for all students.
7. Identify factors in a student`s environment outside school; including family circumstances, community environments, health and economic conditions that may influence student learning.
8. Describe issues related to confidentiality, privacy, and appropriate treatment of students.
9. Describe situations of known or suspected abuse or neglect that would require mandated reporting.
10. Apply the standards of professional conduct in the Code of Ethics for Minnesota teachers to classroom situations.

SPED 203 Exceptionalities and Human Diversity (Diversity)

Historical and philosophical background, disabling conditions and their implications, legal basis, resources, and advocacy.
3 Cr. Fall | Spring | Summer GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES

SPED 204 Program Overview and E-Portfolio

Overview of the programmatic standards for general and special education, how these standards are integrated in special education curriculum, and e-portfolio requirements for documenting acquisition of the above standards.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Use Minnesota Board of Teaching standards to create electronic portfolios.
2. Describe the Minnesota rules and regulations governing licensure of special education teachers in various categorical areas.
3. Describe and summarize special education major transition points and licensure requirements.
4. Use self-reflection and self-assessment to document professional development.
5. Identify the components of the Minnesota Teacher Performance Assessment.

SPED 306 Academic Writing Skills

Research writing course for students who have been referred by their academic advisers or who did not meet Special Education undergraduate or graduate program admission criteria.
3 Cr. DEMAND

Student Learning Outcomes

1. Critcally evaluate their needs and strengths in planning, organizing, and applying key written composition elements.
2. Complete daily assignments that demonstrate how to apply rules for spelling, capitalization,

punctuation, grammar, and sentence and paragraph structure and also will refine writing style for more clarity, concision, coherence, and emphasis.
3. Demonstrate pre-to post-test gains in their knowledge of key written composition elements and also will apply key written composition elements in technically adequate papers.
4. Demonstrate graduate-level writing skills in locating, organizing, and drafting expository literature reviews.
5. Synthesize findings from peer-reviewed sources to write their literature reviews according to APA guidelines.

SPED 338 General Education Field Experience I

Field experience in an elementary, middle, or secondary general education classroom for the special education teacher candidates.
Coreq.: SPED 339, SPED 405, SPED 415, SPED 418, SPED 445 2 Cr. Fall | Spring

Student Learning Outcomes
1. Conduct observations of targeted student behavior.
2. Teach individual and large-group lessons in area of literacy and math as assigned by cooperating teacher.
3. Implement classroom activities and routines (e.g., correcting tests, administering tests, making materials, designing bulletin boards).

SPED 339 General Education Field Experience II

Field experience in an elementary, middle, or secondary general education classroom for special education teacher candidates.
Coreq.: SPED 338, SPED 405, SPED 415, SPED 418, SPED 445 2 Cr. Fall | Spring

Student Learning Outcomes
1. Modify content area materials for students who are struggling.
2. Teach a study strategy to individual student/s, provide individual tutoring, and assist students in preparing for tests.
3. Teach individual and large group lesson/s in any content area per cooperating teacher's request.
4. Implement classroom activities and routines (e.g., correcting tests, administering tests, making materials, designing bulletin boards).

SPED 402 Educational Immersion

Multiple aspects of learning and teaching in diverse learners/communities using an immersion experience in diverse settings.
3 Cr. Summer

SPED 405 Behavior Theories and Practices in Special Education

Assessment and management of behavior problems in the classroom. Functional behavioral assessment, ecobehavioral analysis, cognitive strategies, and crisis prevention.
Coreq.: SPED 338, SPED 339, SPED 415, SPED 418, SPED 445 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Conduct a functional behavioral assessment (FBA) including consideration of the forms and functions of behaviors, context in which behaviors occur, and antecedents and consequences of behaviors.
2. Use the results of the FBA to develop an individual positive behavior support plan.
3. Assess the impact of environmental factors on assessment results and the planning and programming process.
4. Apply systematic procedures for compiling and using data for the purposes of monitoring student behavior and modifying interventions for individual, program, and schoolwide improvement.
5. Identify laws, policies, and ethical principles regarding behavior management planning and implementation of positive behavior supports for students with challenging behavior.

SPED 408 Developmental Screening and Assessment of Young Children

Philosophy, procedures and methodologies used to conduct developmental screening.
3 Cr. DEMAND

SPED 411 Special Education Procedural Safeguards

Preferral, referral, identification, and placement process; legal and professional aspects. Due process requirements.
Coreq.: SPED 416, SPED 419, SPED 440, SPED 455
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Satisfy the due process, data privacy, procedural safeguards, and ethical requirements of the referral, evaluation, planning, and programming processes of special education.
2. Integrate multiple sources of data to develop individualized educational programs and plans.
3. Design individualized education program plans,

considering a range of educational placement options and required levels of support in the least restrictive environment that integrate student strengths, needs, assessment results, and student and family priorities, incorporating academic and nonacademic goals.
4. Communicate the purpose, procedures, and results of interventions, assessments, and the evaluation process to students, families, educators, and other professionals.
5. Communicate the purpose, procedures, and results of interventions, assessments, and the evaluation process to students, families, educators, and other professionals.

SPED 412 Psycholinguistics

Symbolic processes involved in communication. Interpretation of data.
3 Cr. DEMAND

SPED 413 Mathematics Instruction for Students with Special Needs

Evaluation, prescription, and management of mathematics instruction for students with mild to moderate disabilities. Skills and competencies for adapting and modifying instructional materials.
Prereq.: SPED 200 or ED 200 or CFS 200, and SPED 203 3 Cr. DEMAND

Student Learning Outcomes

1. Evaluate, select, develop, and adopt curriculum materials and technology appropriate for individuals with disabilities 2. Use appropriate instructional strategies to teach math skills and concepts according to the characteristics of the learner and patterns of error 3. Modify pace of instruction and use organization cues 4. Integrate appropriate teaching strategies and instructional approaches to provide effective instruction in academic and nonacademic areas for individuals with disabilities
5. Utilize research-supported instructional strategies and practices, including the functional embedded skills approach, community-based instruction, task analysis, multisensory, and concrete/manipulative techniques 6. Use strategies for facilitating the maintenance and generalization of skills across learning environments 7. Structure the educational environment to provide optimal learning opportunities for individuals with disabilities
8. Design learning environments that are multisensory and that facilitate active participation, self-advocacy, and independence of individuals with disabilities in a variety of group and individual learning activities 9. Use appropriate math methods and instructional strategies including articulation, practice, immediate feedback, and review, for individuals who have learning disabilities and who show patterns of error

SPED 415 Assistive Technology for Students with Special Needs

Classroom use of technology and its direct and indirect impact on the delivery of services for students with disabilities. Commercial and teacher-developed assistive technology and devices used as compensatory tools for students with disabilities.
Coreq.: SPED 338, SPED 339, SPED 405, SPED 418, SPED 445 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Evaluate student need for the use of assistive technologies to promote language development, communication skills, and academic literacy.
2. Select, acquire, and use assistive technology and supplementary aids and services in collaboration with parents and specialists.
3. Apply evidence-based methods, strategies, universal design for learning, and assistive technologies to meet individual student needs and provide access to grade-level content standards.
4. Design, implement, monitor, and adjust use of assistive technologies.

SPED 416 Individualized Assessment in Special Education

Administration and interpretation of standardized instruments used in the identification of students with developmental disabilities, emotional/behavioral disorders, and learning disabilities.
Coreq.: SPED 411, SPED 419, SPED 440, SPED 455
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Integrate multiple sources of student data relative to progress toward grade-level content standards from prior prevention and alternate instruction efforts into the referral process.
2. Design, facilitate, and support a comprehensive, multidisciplinary evaluation process using unbiased assessment measures.
3. Select and use assessment measures and procedures that are technically adequate and appropriate for the student and specific assessment purpose.
4. Identify the effects of various physical and mental

health conditions, including the effects of medications, on the educational, cognitive, physical, social, and emotional behavior of individuals with disabilities when planning and administering assessments.
5. Assess the impact of gender, familial background, socioeconomic status, and cultural and linguistic diversity on assessment results and the special education referral, evaluation, planning, and programming process.

SPED 418 General Education Literacy Instruction for Special Educators

Basic techniques for reading and language arts diagnosis and teaching in the regular classroom.
Coreq.: SPED 338, SPED 339, SPED 405, SPED 415, SPED 445 3 Cr. Fall | Spring

Student Learning Outcomes

1. Design appropriate, motivating explicit and implicit instruction in auditory awareness, discrimination of sounds, phonemic awareness, and word awareness.
2. Develop lessons to teach phonics, sight words, spelling, and fluency including the selection, design, and use of instructional programs, materials, texts, and activities.
3. Use basic knowledge of English syntax and semantics improve reading competence, including how to help students interpret and apply English grammar and language conventions in authentic reading, writing, listening, and speaking contexts.
4. Apply a variety of reading comprehension strategies to different types of information materials and content-area texts including teaching the structures and features of expository texts.
5. Select and use a wide-range of engaging texts representing various genres and cultures that match students+ reading levels, interests, cultural and linguistic backgrounds.

SPED 419 Literacy Instruction for Students with Special Needs

Adaptive teaching techniques and materials for reading and language arts. Informal assessment including curriculum-based evaluation and instruction.
Prereq.: for SPED Minor: SPED 418 or ED 408 Coreq.: SPED 411, SPED 416, SPED 419, SPED 440, SPED 455 4 Cr. Fall | Spring

Student Learning Outcomes

1. Collect and interpret academic progress monitoring data using a variety of assessment tools, including general outcome measures, curriculum specific measures, and grade-level content standard measures.
2. Apply knowledge of comprehensive scientifically based reading instruction including phonemic awareness, phonics, fluency, vocabulary development and reading comprehension.
3. Monitor, collect, summarize, evaluate, and interpret data to document progress on skill acquisition and make adjustments to and accommodations in instruction.
4. Modify instruction and teach skills to increase accuracy, fluency, and comprehension in reading, writing, and listening including modifying pace of instruction, introducing monitoring strategies, and providing organizational cues.
5. Design, implement, monitor, and adjust a range of evidence-based instructional strategies and practices and develop and adapt specialized materials that facilitate student engagement and the maintenance and generalization of skills.

SPED 420 Characteristics of Students with Intellectual and Developmental Disabilities

Characteristics and development of students with intellectual and developmental disabilities including psychosocial, educational, vocational, and leisure outcomes.
3 Cr. Fall | Summer

Student Learning Outcomes

1. Identify the etiology, characteristics, and classifications of developmental disabilities and autism spectrum disorders.
2. Identify the general developmental, academic, social and behavioral, and functional characteristics of students with developmental disabilities and autism spectrum disorders as they relate to levels of support needed.
3. Evaluate Minnesota special education eligibility criteria for students with developmental disabilities and autism spectrum disorders.
4. Use medical terminology to define medical conditions for students with developmental disabilities and autism spectrum disorders, including the role of other professionals in meeting educational needs.

SPED 421 Characteristics of Students with Learning and Behavior Disorders

Characteristics of and issues related to students with learning and behavior disorders including psychosocial, educational, vocational, and leisure outcomes.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Identify the etiology, characteristics, and classifications of learning disabilities and emotional/behavioral disorders.
2. Identify the general developmental, academic, social and behavioral, and functional characteristics of students with disabilities and emotional/behavioral disorders as they relate to levels of support needed.
3. Evaluate Minnesota special education eligibility criteria for students with disabilities and emotional/behavioral disorders.
4. Use medical terminology to define medical conditions for students with disabilities and emotional/behavioral disorders, including the role of other professionals in meeting educational needs.

SPED 422 Emotional/Behavioral Disorders Methods

Intervention approaches for the management of elementary and secondary age students with emotional/behavioral disorders.
Coreq.: SPED 470, SPED 471, SPED 490 3 Cr. Fall | Spring

Student Learning Outcomes
1. Utilize principles of universal design for learning in order to meet student needs across disability areas and across settings and provide access to grade-level content standards.
2. Design, implement, monitor, and adjust goals and objectives to address the individual strengths and needs of students with emotional or behavioral disorders.
3. Select and apply evidence-based instructional practices, for academic instruction, social skills instruction, affective education, and behavior management for students with emotional/behavioral disorders and diverse needs within a common instructional setting.
4. Apply strategies to increase problem solving skills, study skills, organizational skills, coping skills, social skills, self-advocacy, self-assessment, self-awareness, self-management, self-control, self-reliance, self-esteem, and other cognitive strategies to ensure individual success in one-to-one, small-group, and large-group settings.
5. Cultivate professional relationships that encourage peer observation, coaching, and systems for giving and receiving feedback from colleagues to enhance student instruction and program outcomes.

SPED 425 Teaching K-12 Learners with Special Needs

Characteristics and needs of students identified with disabilities or who are "at risk" for failure in general education classrooms. Techniques and strategies to facilitate the inclusion of these students in general education, including instructional modifications, classroom behavior management, promoting social acceptance, and modifying the classroom environment to accommodate learners with special needs.
Prereq.: ED 300 2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Demonstrate knowledge of the various categories of exceptionality as defined by PL 94-142 - IDEA.
2. Students will demonstrate knowledge of the Individualized Education Plan (IEP) process.
3. Students will define the roles of various professionals related to providing services to individuals with disabilities.
4. Students will demonstrate knowledge of the secondary teacher's role in the special education process.
5. Students will demonstrate, in their content areas, successful teaching strategies to utilize with students who have disabilities.

SPED 431 Collaboration Skills and Transition Planning in Diverse Settings

Analysis and application of various collaboration methods for working with agencies, educational staff and multicultural populations. Students with disabilities in transition from secondary to post secondary environments. Coordination of multiple service agencies in those transitions.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Create individualized plans that addresses the transition needs of students to enhance participation in family, school, recreation or leisure, community, and work life, including personal self-care, independent living, safety, and prevocational and vocational skills.
2. Design and manage positive instructional environments that convey high expectations for students to develop their independence, self-

motivation, self-direction, self-regulation, and self-advocacy.
3. Work collaboratively with family members, including children and youth, in designing, implementing, and evaluating individual transition plans and programs.
4. Access services, networks, agencies, and organizations for individuals with autism spectrum disorders, developmental cognitive disability, emotional or behavioral disability, specific learning disabilities, and other health disabilities and their families.

SPED 440 English Learners with Special Needs

Issues, trends, and evidence-based instructional strategies for English learners and bilingual education students with special needs. Field experience included. (ENGL 460 and ED 460 will substitute for this course with permission.)
3 Cr. Fall | Spring

Student Learning Outcomes

1. Appraise and discuss the particular linguistic, cultural, and learning needs and contributions of English language learners in their content areas for the purposes of designing instruction.
2. Analyze examples of spoken and written language for the purpose of assessing English learners' needs and planning instruction for English language learners in the content areas.
3. Evaluate theories of first-and second-language acquisition for the purpose of designing instruction to meet the needs of English language learners.
4. Design instructional approaches and modifications based on learner needs and language learning theory in order to meet the needs of English language learners in the content areas.
5. Evaluate and discuss a variety of assessments and assessment formats and conditions for the purpose of preparing English learners for those assessments and for the purpose of developing accommodations and modifications as needed.

SPED 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-6 Cr. Fall | Spring | Summer

SPED 445 Social and Natural Sciences for Special Educators

Research-supported strategic teaching practices, adaptations and modifications for students with disabilities in content area classes and in oral and written expression, and listening comprehension.
Coreq.: SPED 405, SPED 415, SPED 418, SPED 338, SPED 339 3 Cr. Fall | Spring

Student Learning Outcomes

1. Adapt and modify curriculum and deliver evidence-based instruction in social and natural sciences aligned with state and local grade-level content standards to meet individual learner needs.
2. Design, implement, modify, and adjust instructional programs and processes and adapt materials and environments to enhance individual student participation and performance in social and natural sciences.
3. Select and apply evidence-based instructional practices, including those supported by scientifically based research when available, for academic instruction for students with a range of disabilities and diverse needs in social and natural sciences.
4. Apply strategies to increase academic skills, reasoning, problem solving skills, study skills, organizational skills, coping skills, self-management, test-taking skills, and other cognitive strategies to ensure individual success in one-to-one, small-group, and large-group settings.
5. Design, implement, monitor, and adjust a range of evidence-based instructional strategies and practices and develop and adapt specialized materials that facilitate student engagement and the maintenance and generalization of skills.

SPED 446 Learning Disabilities Methods

Examination and application of strategies for elementary-and secondary-age students with learning disabilities. Focus is on the role of the learning strategy specialist in resource and inclusive settings.
Coreq.: SPED 480, SPED 481, SPED 490 3 Cr. Fall | Spring

Student Learning Outcomes

1. Utilize principles of universal design for learning in order to meet student needs across disability areas and across settings and provide access to grade-level content standards.
2. Design, implement, monitor, and adjust goals and objectives to address the individual strengths and needs of students with specific learning disabilities.
3. Select and apply evidence-based instructional practices, for academic instruction, for students with

learning disabilities and diverse needs within a common instructional setting.
4. Apply strategies to increase academic skills, reasoning, problem solving skills, study skills, organizational skills, coping skills, social skills, self-advocacy, self-assessment, self-awareness, self-management, self-control, self-reliance, self-esteem, test-taking skills, and other cognitive strategies to ensure individual success in one-to-one, small-group, and large-group settings.
5. Cultivate professional relationships that encourage peer observation, coaching, and systems for giving and receiving feedback from colleagues to enhance student instruction and program outcomes.

SPED 447 Developmental Disabilities Methods: Moderate/Severe

Methods and materials for instruction and programming for students with moderate/severe developmental disabilities; techniques for inclusion.
Coreq.: SPED 460, SPED 461, SPED 490 3 Cr. Fall | Spring

Student Learning Outcomes

1. Utilize principles of universal design for learning in order to meet student needs across disability areas and across settings and provide access to grade-level content standards.
2. Design, implement, monitor, and adjust goals and objectives to address the individual strengths and needs of students with developmental cognitive disabilities.
3. Select and apply evidence-based instructional practices, for academic instruction, social skills instruction, affective education, and behavior management for students with a range of disabilities and diverse needs within a common instructional setting.
4. Apply strategies to increase functional developmental skills, academic skills, reasoning, problem solving skills, organizational skills, coping skills, social skills, self-advocacy, self-assessment, self-awareness, self-management, self-control, self-reliance, and other cognitive strategies to ensure individual success in one-to-one, small-group, and large-group settings.
5. Cultivate professional relationships that encourage peer observation, coaching, and systems for giving and receiving feedback from colleagues to enhance student instruction and program outcomes.

SPED 449 Practicum Seminar: K-12 Special Education Settings

Field internship seminar: students with disabilities in elementary and secondary settings.
Coreq.: 1-4 Cr. Fall | Spring

SPED 452 Advanced Methods and Interventions for Students with Mild-Moderate Disab

Examination and application of strategies for elementary-and secondary-age students with mild and moderate disabilities in the areas of autism, developmental cognitive disabilities, emotional or behavioral disorders, learning disabilities, and other health disabilities.
Coreq.: SPED 456 or SPED 656, SPED 457 or SPED 657 3 Cr. Fall | Spring

Student Learning Outcomes

1. Design small-group academic lessons that address learners' needs, attitudes, strengths, and affective concerns 2. Demonstrate effective collaboration practices with general education teachers and staff and assess their own practices 3. Demonstrate skills required to work with paraprofessionals and assess their own practices 4. Design a functional behavioral assessment (FBA) and implement a Behavior Intervention Plan (BIP) for a student in his/her student teaching setting 5. Implement co-teaching strategies in his/her student teaching setting
6. Implement academic and social skills strategies to improve learner outcomes 7. Use technology to support learning and study skills

SPED 453 Practicum in General Education for the Special Educator

Field experiences general education (elementary/secondary) settings.
Prereq.: SPED 403 - SPED 503 Coreq.: 1-2 Cr. Fall | Spring

SPED 455 Special Education Field Experience

Field experience in a special education classroom.
Coreq.: SPED 411, SPED 416, SPED 419, SPED 440 2 Cr. Fall | Spring

Student Learning Outcomes

1. Appraise roles and responsibilities of all team members during a due process meeting.
2. Complete due process paperwork/data entry with guidance of teacher.
3. Design and implement curriculum modifications.
4. Implement an academic intervention plan and monitor student progress.

SPED 456 Student Teaching in Mild-Moderate Disabilities: Elementary

Field internship in an elementary school program for students with mild-moderate disabilities.
Coreq.: SPED 452/552, SPED 457 6 Cr. Fall | Spring

Student Learning Outcomes

1. Plan instruction and assessment to meet learners' needs.
2. Instruct and engage students in learning academic, social, and behavioral skills.
3. Assess student learning using informal and formal measurements.
4. Analyze teaching performance using date-based performance measures.

SPED 457 Student Teaching in Mild-Moderate Disabilities: Secondary

Field internship in a middle school or secondary school program for students with mild-moderate disabilities.
Coreq.: SPED 452 or SPED 552, SPED 456 6 Cr. Fall | Spring

Student Learning Outcomes

1. Plan instruction and assessment to meet learners' needs.
2. Instruct and engage students in learning academic, social, and behavioral skills.
3. Assess student learning using informal and formal measurements.
4. Analyze teaching performance using data-based performance measures.

SPED 460 Student Teaching in Developmental Disabilities: Mild/Moderate

Field internship in elementary/secondary school programs for students with mild/moderate developmental disabilities. Paraprofessional supervision techniques. Departmental approval required.
6 Cr. Fall | Spring

Student Learning Outcomes

1. Conduct formal and informal assessments as part of comprehensive evaluation and write Evaluation Report.
2. Write an IEP based upon evaluation data and communicate results at the IEP meeting.
3. Create lesson plans related to IEP goals and benchmarks to provide access to the curriculum instruction.
4. Use knowledge of students and student performance to tailor strategies related to IEP goals and benchmarks.
5. Use progress-monitoring assessments to provide evidence of student progress toward instructional objectives.
6. Demonstrate effective co-teaching strategies.

SPED 461 Student Teaching in Developmental Disabilities: Moderate/Severe

Field internship in elementary/secondary school programs for students with moderate/severe developmental disabilities. Paraprofessional supervision techniques. Departmental approval required.
6 Cr. Fall | Spring

Student Learning Outcomes

1. Use progress-monitoring assessments to provide evidence of student progress toward instructional objectives.
2. Use evidence to evaluate and change teaching practice to meet the varied needs of students in the classroom.
3. Develop strategies to engage students in applying knowledge and skills.
4. Elicit and monitor student responses in order to provide deeper access to learning in the subject area.
5. Collaborate with general education teachers to implement prereferral intervention procedures.
6. Demonstrate effective co-teaching strategies.

SPED 470 Student Teaching in Emotional/Behavioral Disorders: Levels I-III

Field internship in Levels I-III elementary/secondary school programs for students with emotional/behavioral disorders. Paraprofessional supervision techniques. Departmental approval required.
6 Cr. Fall | Spring

Student Learning Outcomes

1. Conduct formal and informal assessments as part of comprehensive evaluation and write Evaluation Report.
2. Write an IEP based upon evaluation data and communicate results at the IEP meeting.
3. Create lesson plans related to IEP goals and benchmarks to provide access to the curriculum instruction, and assessment represented in a general education assessment task.
4. Use knowledge of students and student performance to tailor strategies related to IEP goals

and benchmarks.
5. Use progress-monitoring assessments to provide evidence of student progress toward instructional objectives.
6. Demonstrate effective co-teaching strategies.

SPED 471 Student Teaching in Emotional/Behavioral Disorders: Levels IV-V

Field internship in Levels IV-V elementary/secondary school programs for students with emotional/behavioral disorders. Paraprofessional supervision techniques. Departmental approval required.
6 Cr. Fall | Spring

Student Learning Outcomes

1. Use progress-monitoring assessments to provide evidence of student progress toward instructional objectives.
2. Use evidence to evaluate and change teaching practice to meet the varied needs of students in the classroom.
3. Develop strategies to engage students in applying knowledge and skills.
4. Elicit and monitor student responses in order to provide deeper access to learning in the subject area.
5. Collaborate with general education teachers to implement prereferral intervention procedures.
6. Demonstrate effective co-teaching strategies.

SPED 480 Student Teaching in Learning Disabilities: Elementary

Field internship in elementary school programs for students with learning disabilities. Paraprofessional supervision techniques. Departmental approval required.
6 Cr. Fall | Spring

Student Learning Outcomes

1. Conduct formal and informal assessments as part of comprehensive evaluation and write Evaluation Report.
2. Write an IEP based upon evaluation data and communicate results at the IEP meeting.
3. Create lesson plans related to IEP goals and benchmarks to provide access to the curriculum instruction, and assessment represented in a general education assessment task.
4. Use knowledge of students and student performance to tailor strategies related to IEP goals and benchmarks.
5. Use progress-monitoring assessments to provide evidence of student progress toward instructional objectives.
6. Demonstrate effective co-teaching strategies.

SPED 481 Student Teaching in Learning Disabilities: Secondary

Field internship in secondary school programs for students with learning disabilities. Paraprofessional supervision techniques. Departmental approval required.
6 Cr. Fall | Spring

Student Learning Outcomes

1. Use progress-monitoring assessments to provide evidence of student progress toward instructional objectives.
2. Use evidence to evaluate and change teaching practice to meet the varied needs of students in the classroom.
3. Develop strategies to engage students in applying knowledge and skills.
4. Elicit and monitor student responses in order to provide deeper access to learning in the subject area.
5. Collaborate with general education teachers to implement prereferral intervention procedures.
6. Demonstrate effective co-teaching strategies.

SPED 490 Special Education Senior Seminar

Weekly seminar to review student teaching goals and objectives; electronic portfolio assessment. Coreq.: Methods (422, 446 or 447) and Student Teaching (460/461, 470/471 or 480/481) 1 Cr. Fall | Spring

Student Learning Outcomes

1. Apply knowledge and critical thinking skills to solve instructional and behavioral problems.
2. Examine the role of a collaborative leader with respect to engaging in professional communication, exploring challenges in the role of consultant, and managing relationships with school personnel (e.g., paraprofessionals, school psychologists, other teachers).
3. Use self-evaluation and reflection skills as part of the TPA to evaluate student teaching performance.
4. Synthesize information obtained Methods/Interventions courses and discuss how effective practices are applied in student teaching.
5. Demonstrate professionalism through activities that focus on entry into field.

Statistics (STAT)

STAT 193 Statistical Thinking (GED CORE)

Statistical background to critically read results reported in today's media regarding social, environmental and medical choices; how to collect good data; describe data graphically and numerically; uses and abuses of statistics; understanding variation and statistical significance; modeling chance; statistics in the courtroom, lotteries, opinion pools and other case studies; emphasis on understanding concepts rather than on computations; use of software packages and the internet.
Prereq.: MATH 070 or high school advanced algebra with satisfactory math placement score 3 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

STAT 219 Statistical Methods I for Social Sciences

Descriptive statistics, graphical displays, random sampling, and normal distribution; introduction to confidence intervals and hypothesis tests for means and proportions; paired t-test, chi-square test in contingency tables, brief introduction to correlation and simple linear regression; social science applications; use of statistical software.
Prereq.: STAT 193 or MATH 193 or satisfactory math placement score 3 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

STAT 239 Statistical Methods I for Natural Sciences

Descriptive statistics, correlation and regression, design and sampling methods, one and two sample inferences for means and proportions. Introduction to chi-square tests and one-way ANOVA. Use of statistical software.
Prereq.: STAT 193 or MATH 112 or satisfactory math placement score 3 Cr. Fall | Spring | Summer GOAL AREA 4: MATHEMATICAL THINKING & QUANTITATIVE REASONING

Student Learning Outcomes

1. Identify appropriate sampling methods.
2. Generate and interpret basic descriptive statistics.
3. Apply basic probability rules.
4. Perform and correctly interpret a variety of statistical inferences for the mean, proportion, and variance.
5. Perform and correctly interpret the chi-square goodness of fit and independence tests.
6. Perform and correctly interpret one and two-way ANOVA.
7. Analyze and use linear regression and correlation.
8. Use a statistical software package to apply these statistical techniques.

STAT 242 Statistical Methods I for Business

Business problem solving: Data collection, summarizing and describing data, estimation and hypotheses testing, analysis of variance, regression analysis, time series, quality control, decision analysis. Use of statistical software.
Prereq.: MATH 196 or MATH 112 or equivalent 4 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Students will be able to select and use appropriate statistical methods, including: study design, graphical and numerical summaries, probability models, z-scores and the normal distribution, one- and two-sample hypothesis tests and confidence intervals, chi-square tests, simple and multiple linear regression, analysis of variance, time series analysis, quality control, and decision theory.
2. Students will be able to analyze a business problem through the application of an appropriate statistical method and the appropriate use and interpretation of statistical software.
3. Students will be able to evaluate the validity of a statistical analysis of data.

STAT 304 SAS Programming

SAS statistical package; basic data manipulations and procedures; formatting, if-then-else, merge, arrays, do-loops, macros, functions, table look-up, custom reports.
Coreq.: A statistics course or consent of the instructor 3 Cr. Fall

Student Learning Outcomes

1. Identify and use the structures of a SAS program.
2. Write typical SAS programs made up of DATA and PROC steps.
3. Use the SAS programming environment and employ various tools therein for writing, and debugging SAS programs.
4. Produce, critically examine, and interpret output of a SAS program.
5. Manipulate raw data internally in SAS and manipulate raw data from external files into SAS to create SAS data sets.
6. Read data into SAS using various INFORMATS and INPUT styles.

7. Write SAS variables using various FORMATS.
8. Manipulate (i.e. subset) SAS data sets at different stages using various programming tools such as logical expressions in the DATA step.
9. Manipulate data properly in the DATA STEP which includes DATA manipulations using SAS functions and the DROP or KEEP options.
10. Identify proper overall syntactic calls for various SAS procedures as well as options and ancillary statements within their syntaxes.

STAT 321 Statistical Methods II

Statistical methods for analyzing data beyond Statistical Methods I. Modeling data using simple and multiple regression, and one- and two-way analysis of variance. Transformations, model selection, multiple comparisons, randomized block design, and interactions.
Prereq.: One of: STAT 219, STAT 239, STAT 242, or STAT 353 3 Cr. Fall | Spring

Student Learning Outcomes

1. Compute correlation coefficients and regression coefficients for simple linear regression models.
2. Test hypotheses for parameters in simple and multiple regression models.
3. Construct confidence intervals and prediction intervals for regression models.
4. Use dummy variables in modeling categorical effects in regression models.
5. Analyze data using regression models, with statistical software.

STAT 325 Statistical Modeling with R

An introduction to R, RStudio, and R Markdown. R programming basics; R packages; descriptive statistics and graphics; statistical inference; statistical modeling; simulation and resampling methods.
Prereq.: One of: STAT 219, STAT 239, STAT 242, or STAT 353 3 Cr. Spring

Student Learning Outcomes

1. Students will be able to use R and R Markdown to write well documented code.
2. Students will be able to use R to manipulate and summarize data.
3. Students will be able to use R to create useful graphical summaries of data.
4. Students will be able to use R for basic statistical modeling of data.

STAT 353 Statistical Methods I for Engineering

Probability distributions; introduction to statistical methods, including hypothesis testing and confidence intervals, one-way anova, simple linear regression, quality control basics; applications, and the use of statistical software.
Prereq.: MATH 211 or MATH 221 3 Cr. Fall | Spring

Student Learning Outcomes

1. Summarize data distributions using descriptive statistical methods.
2. Use appropriate probability distributions.
3. Choose an appropriate statistical method when analyzing engineering data.
4. Interpret the results of inferential statistics when analyzing engineering data.

STAT 360 Introduction to Data Visualization

Graphically explore a wide variety of data sets. Visual techniques to improve the understanding and communication of complex data. Hands-on implementation of these techniques with real data sets. Methods for visualizing large data sets, including high dimensional data. Dynamic data visualizations. Good design practices for visualization and presentation of results.
Prereq.: One of: STAT 219, STAT 239, STAT 242, or STAT 353 3 Cr. Fall

Student Learning Outcomes

1. Students will be able to recommend, construct and interpret appropriate visualizations for various types of data sets.
2. Students will be able to organize and communicate complex information concisely using data visualization.
3. Students will be able to describe the insights that good data visualization provides.
4. Students will be able to use data visualization software.

STAT 380 Statistical Consulting and Data Analysis I

Introduction to statistical consulting. Principles of good consulting practice. Effective communication skills for understanding the client's problem and available data, and choosing an appropriate procedure. Understanding client expectations, dealing with difficult clients, and working effectively with people individually and in teams.
Prereq.: STAT 321 and one of STAT 304 or STAT 325 3 Cr. Fall

Student Learning Outcomes
1. Reveal, restate, and assess statistical issues faced in diverse disciplines by meeting with varied clients.
2. Speak, write, listen, and generally communicate effectively with clients needing statistical assistance.
3. Use effective strategies for analysis of data from clients.
4. Write summary reports for analysis done for clients.

STAT 381 Statistical Consulting and Data Analysis II

Data analysis for statistical consulting projects. Working with the client to understand the problem and available data. Carrying out and documenting an appropriate analysis. Preparing written and oral summaries. Communication of results to the client.
Prereq.: STAT 380 3 Cr. Spring

Student Learning Outcomes
1. Apply appropriate statistical techniques to a client's data.
2. Communicate effectively using written summaries of data analysis.
3. Communicate effectively using oral summaries of data analysis.
4. Using appropriate statistical analysis techniques to solve problems.

STAT 415 Data Mining

Data mining principles and applications. Predictive modeling techniques for large data sets include classification and regression trees, logistic regression, neural networks, random forests and boosted trees. Handle missing values and outliers. Compare models and deploy best model to predict new data. Hands-on use of data mining software.
Prereq.: STAT 321 3 Cr. Spring

Student Learning Outcomes
1. Students will be able to explore large data sets graphically to better understand the data.
2. Students will be able to describe data mining principles.
3. Students will be able to explain the history of data mining and today’s important applications.
4. Students will be able to choose and apply appropriate predictive modeling techniques.
5. Students will be able to use data mining software.

STAT 417 Applied Probability and Simulation

Probability distributions and random variables, simulation of random variates, probability modeling, applications to Markov chains, queueing models, reliability and survival; use of software.
Prereq.: MATH 211 or MATH 221, and one programming course 3 Cr. Spring

Student Learning Outcomes
1. Distinguish between different discrete and continuous probability models.
2. Represent stochastic applications with probability models.
3. Write computer algorithms to simulate stochastic events.

STAT 421 Applied Regression Methods

Advanced regression methods focused on complex real-world data. Model checking and diagnostics, model building, transformations, polynomial regression, logistic regression, general linear models, nonparametric regression methods.
Prereq.: STAT 321 3 Cr. Spring

Student Learning Outcomes
1. Determine meaning and perform computation of regression coefficients and diagnostics.
2. Select the best regression equation based on a given criterion.
3. Use computer software to perform a variety of regression analysis and ANOVA.
4. Apply inferential methods to test hypotheses in regression and a variety of ANOVA problems.
5. Use the logistic regression analysis for binary response data.

STAT 424 Statistical Design for Process Improvement

A study of statistically designed experiments which have proven useful in product development and process improvement; topics include randomization, blocking, factorial treatment structures, fractional factorial designs, screening designs, Taguchi methods, response surface methods; use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

Student Learning Outcomes
1. Explain basic concepts of statistical process control.
2. Construct control charts.
3. Apply basic experimental design techniques to product development and process improvement.

STAT 427 Applied Time Series

A study of the most useful techniques of analysis and forecasting using time series data. Topics include an introduction to forecasting, time series regression, decomposition methods, smoothing, smoothing techniques, basic techniques of Box-Jenkins methodology; use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

Student Learning Outcomes
1. Derive autocorrelation functions for stationary time series such as AR and MA processes.
2. Select appropriate time series models in the ARIMA family for time series data in different situations.
3. Diagnose the fitting of an ARIMA model to a time series and forecast future values of the time series.
4. Interpret analysis results and deliver findings with a written report.
5. Use R or other software to analyze time series data, including the plots of sample autocorrelation function, sample partial autocorrelation function, and extended autocorrelation function.

STAT 430 Multivariate Statistical Methods
Principal component analysis, factor analysis, discriminant analysis, cluster analysis, manova, profile analysis, repeated measures; applications and use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

Student Learning Outcomes
1. Organize and summarize multivariate data.
2. Identify basic properties of multivariate normal distributions.
3. Apply appropriate multivariate statistical analysis techniques such as MANOVA, principle component analysis, factor analysis, discrimination and classification to different problems.
4. Analyze multivariate data using statistical software.

STAT 433 Nonparametric Statistics
Efficiency comparison of mean and median, one and two sample location problems, effect of alternative score functions, randomization and permutation tests, the independence problem, and selected problems in regression. Use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

Student Learning Outcomes
1. Perform the sign test and its variations to analyze binomial data.
2. Use the Chi-squared test to analyze contingency tables and test goodness-of-fit.
3. Use the rank test and its variations to compare the distributions of two or more groups.
4. Use randomization and permutation tests to compare two groups.
5. Distinguish and compare various nonparametric tests.
6. Analyze data through using nonparametric procedures in statistical software.

STAT 436 Applied Categorical Data Analysis
Introduction to the analysis of discrete data; log-linear models for two-way and multi-way tables; linear logistics regression models; association models and models of symmetry; applications, use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

Student Learning Outcomes
1. Use contingency tables to test hypotheses concerning two or more categorical variables.
2. Use both Pearson chi-square and likelihood ratio chi-square test statistics.
3. Differentiate between the application of binomial, Poisson, and hypergeometric probability models.
4. Use exact tests for inference with small sample sizes.
5. Apply generalized linear models to appropriate data, through the use of statistical software.

STAT 440 Topics in Statistics
Study of modern topics in theoretical or applied statistics.
3 Cr. DEMAND

Student Learning Outcomes
1. Apply foundational statistical principles to the study of advanced statistical concepts from Bayesian analysis, design of experiments, bootstrapping, or other topics of current interest in the statistical literature.
2. Analyze data according to advanced principles through the use of statistical software.

STAT 444 Internship
Participation in a full or part-time position with a cooperating business, governmental, or civic organization whose program has been approved in advanced by the department of statistics. Credits are provided upon completion of all requirements of the internship. Can substitute for STAT 480 if approved by the department. Any remaining credits apply to

university electives for graduation.
Coreq.: 3-12 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Find an appropriate application of statistical principles that is useful in one or more industrial or educational settings.
2. Provide satisfactory job performance under the supervision of a team manager with the applied setting.
3. Consult and advise effectively with non-statisticians working in such settings.

STAT 447 Basic Elements of Probability Theory
A more mathematical treatment of probability distributions than STAT 417. Probability concepts and laws; sample spaces, combinations and permutations, Bayes' theorem, discrete and continuous random variables, expected value, distribution of functions of random variables, two-demensional variates, central limit theorem; T, F, and chi-square distributions.
Prereq.: MATH 320 or MATH 321 3 Cr. Fall

Student Learning Outcomes
1. Employ the concepts of sample space and event to calculate classical probabilities.
2. Apply tree diagrams, the law of total probability, and Bayes' rule to calculate conditional probabilities.
3. Define and use random variables.
4. Identify and examine typical distributions such as binomial, Poisson, geometric, hypergeometric, normal, uniform, gamma, beta, and exponential distributions.
5. Calculate marginal distributions and conditional distributions for a given joint distribution.
6. Calculate the mean, variance, quantiles, and moment generating function of a distribution.
7. Calculate the conditional mean and conditional variance of a distribution.
8. Use Jacobians to find distributions or joint distributions.
9. Distinguish basic sampling distributions such as normal, chisquared, t, and F distributions.
10. Apply typical distributions to solve real life problems.

STAT 448 Basic Elements of Statistical Theory
Theory of estimation and hypothesis testing; maximum likelihood, method of moments, likelihood ratio tests; elementary mathematical functions illustrate theory.
Prereq.: STAT 447 3 Cr. Spring

Student Learning Outcomes
1. Apply estimation theory to find point estimators such as method of moments estimator, maximum likelihood estimator and Bayesian estimator for population parameters.
2. Differentiate and compare the point estimators under various optimal criteria.
3. Specify the large sample properties of these point estimators.
4. Construct confidence intervals for population parameters.
5. Apply the hypothesis testing theory to test population parameters.
6. Construct the rejection region or compute the P-value, identify type I and type II errors and compute the power of a given test.

Teacher Development (ED)

ED 200 Introduction to Education
Will introduce students to the broad field of education including a focus on children and families, the role of the teacher, the role of schools and educational programs in communities and the broader society, history and philosophy of education, educational futures, teacher education knowledge base, and contemporary issues. Includes field experience in area schools. Same as CFS/SPED 200.
Prereq.: 2.50 GPA 3 Cr. Fall | Spring

Student Learning Outcomes
1. Apply knowledge of educational history and philosophy to decisions made about personal directions in education.
2. Analyze how societal problems and current controversial issues affect schools and teachers.
3. Describe current licensure rules for Minnesota teachers.
4. Use co-teaching strategies while working in schools and in classes.
5. Demonstrate the characteristics of professional teachers and the MN Code of Ethics for teachers within their class work and in school settings.
6. Use a variety of educational technologies as tools for teaching and learning.
7. Create pluralistic, welcoming classroom environments based on knowledge of the socio-economic, cultural and religious diversity within Minnesota school populations.
8. Apply knowledge of the special needs population to the creation of inclusive classroom environments.

ED 250 Children's Rights (Diversity)

Analysis of issues related to children's rights.
3 Cr. DEMAND

ED 300 Teaching in Middle School and High School

Role of the teacher in middle level schools and high schools, teaching as a profession, standards for teaching and learning, basic lesson design, technology in education, structure of middle level and high schools, and schools as organizations. Includes a field experience in area schools.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Contribute to building a community of learning in which they interact with their peers and the instructor, share their work and ideas, and begin to develop independently their own work ethos.
2. Develop the communication skills they require for effective classroom teaching, management, and leadership.
3. Reflect on their roles as more than just content area specialists and what that means in their professional, social, and civic responsibilities as future in-service teachers.
4. Develop the ability to think like an assessor incorporating in their planning for teaching formative, summative, and performative assessments; by means of which they will evaluate multidimensionally students' understanding of content. Expectations that federal, state, and local levels may have for them as in-service teachers.
5. Commit to meet the needs of and validate all learners; including students with language-based learning disabilities, developmental disabilities, and from linguistically and culturally non-majoritarian backgrounds.
6. Explain broadly how schools are organized, and how their operation influences teachers' work.
7. Critique the implications of inclusion and equity in educational opportunity as these influence teaching and learning.
8. Explain the effects of education policy making on education in the USA and the implications policy decisions at federal, state, and local levels may have for them as in-service teachers.

ED 303 Planning for Differentiation in K-6 classrooms

Differentiation, academic language, lesson planning and classroom environment as components of the edTPA assessment.
Prereq.: 2.75 GPA, NES Tests, ED 200, ED 315 Coreq.: ED 305 1 Cr. Fall | Spring

Student Learning Outcomes

1. Design learning engagements to meet the needs of diverse groups of learners encompassing a variety of learning modalities and needs.
2. Demonstrate and model the use of academic language in learning engagements.
3. Create learning environments based on mutual respect and rapport.

ED 305 Curriculum and Instruction for Elementary and Pre-Adolescent Students

Organization, structure and processes of classrooms and schools for elementary and early adolescent students.
Prereq.: ED 200, NES Basic Skills Test or equivalent, 2.75 GPA, ED 315 4 Cr. Fall | Spring

ED 310 Children's Literature in the Elementary and Middle School Classroom

Exploration and evaluation of all types of literature for children and young adults. Includes the promotion of lifelong reading among children through the development of classroom strategies and experiences.
Prereq.: ED 200, 2.75 GPA. NES Basic Skills or equivalent Coreq.: ED 315, IM 421 3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate knowledge of the foundations of the reading processes of emergent readers using narrative and informational texts.
2. Include a variety of formal and informal tools to assess students' literacy learning.
3. Develop a model classroom that demonstrates a motivating environment that fosters foundational literacy including developing and providing opportunities for daily independent reading, self-selecting materials to read, frequent opportunities for sharing what is read.
4. Integrate a variety of strategies to motivate students to read at home and encourage parents or guardians to read to their children, in English and/or in the primary languages of English language learners.
5. Demonstrate knowledge of how to select, evaluate and respond to literature from a range of genres, era, perspectives and cultures.
6. Explicate the process of helping children consolidate knowledge of English grammar and improving reading fluency and comprehension.

ED 315 Primary/Kindergarten Methods

Aims, methods, philosophy, continuity of growth problems in kindergarten/primary education. Prereq.: ED 200, 2.75 GPA, NES Basic Skills Test or Equivalent Coreq.: ED 310, IM 421 3 Cr. Fall | Spring

Student Learning Outcomes

1. Explicate the process to create and maintain a motivating classroom and school environment.
2. Demonstrate teacher and student interactions that promote ongoing student engagement and literacy for all students.
3. Reflect on the contribution of oral language development to literacy development.
4. Describe and use instructional practices that support the development of oral language.
5. Design and use multisensory techniques to teach concepts about print including knowledge about letters, word, sentences, uppercase and lowercase letter recognition and formation, and the instruction of the alphabetical principle.
6. Describe phonological awareness, the connection between phonological awareness and reading achievement, and the instructional progression of phonological awareness.

ED 374 Multicultural Children's Literature

Examines cultural and religious differences and similarities, contributions of women and minority groups to literature and the social issues and forces of discrimination.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze and describe diversity in children's/young adolescent literature.
2. Locate scholarly resources related to children's literature/young adult literature and review various perspectives for using them in classroom teaching.
3. Distinguish among major award-winning books (Coretta Scott King, Pura Belpre Award, Mildred L. Batchelder Award, Lambda Literary Award, etc.) and develop a knowledge base of current authors, poets, illustrators and publishers of children's literature/young adult literature.
4. Describe the literary merit of current children's books/young adult literature.
5. Demonstrate the importance between critical literacy and children's literacy development.

ED 404 Lesson Planning and Learning Assessment in K-6 classrooms

Planning for student engagement and learner support, assessment tools, video recording in the classroom, providing useful feedback to learners, expectations within the edTPA assessment. Prereq.: ED 305 Coreq.: ED 420 Cr. Fall | Spring

Student Learning Outcomes

1. Design sequences encompassing appropriate standards that includes supports for learner differences and a focus on academic language 2. Use appropriate assessment techniques that measure learning in context 3. Evaluate plans based on assigned rubrics

ED 405 Completing the edTPA for Elementary Education

Editing and uploading edTPA materials, assessing use of academic language, assessing utility of academic supports, and assessing feedback provided to learners. Engagements for further growth. Prereq.: ED 408, ED 420 Coreq.: ED 422 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze teaching based on assigned rubrics and identify skills and techniques for further development.
2. Evaluate student learning and success of the learning engagements using appropriately designed assessment tools.
3. Evaluate the use of academic language and the learning supports provided during the learning segment.
4. Document learning using appropriate evidence.

ED 406 Classroom Management K-6

Development of appropriate practices, organization, management in K-6 classroom environments. Emphasis on Community Building, child centered learning and democratic classroom practices. Prereq.: ED 305; 2.75 GPA 3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify the potential learning and emotional outcomes of various classroom management and organizational structures.
2. Choose from and apply different approaches to classroom management and organization.
3. Understand and be able to implement appropriate strategies to address bullying, special needs children, GLBT parents and children and children from diverse ethnic and religious backgrounds within the context of organizing and managing a classroom.

4. Select from and apply a variety of strategies for day-to-day management and organizational tasks.
5. Create classroom organizations that build classroom community, mutual respect, individual responsibility, pro-social behavior, and democratic/pluralistic values.

ED 407 Instructional Mathematics

Methodology, assessment, school mathematics programs, the needs of diverse learners, and issues of curriculum, and State and discipline standards in elementary mathematics instruction.
Prereq.: ED 305, MATH 201, Math 301, 2.75 GPA 3 Cr. Fall | Spring

Student Learning Outcomes

1. Demonstrate the ability to differentiate mathematics teaching strategies in content, procedure and assessment.
2. Reflect on the planning, instruction and assessment performance by teaching the real elementary students mathematics.
3. Extend the understanding of mathematic content knowledge to the understanding of mathematics teaching knowledge for helping children learn mathematics in the real life situation.
4. Integrate pedagogical content knowledge in mathematics into the different elementary mathematics curriculum and instruction used in the real elementary school sets.
5. Modify different mathematics teaching situation and create different activities to reach different students' needed in learning mathematics.

ED 408 Literacy Instruction in the Elementary School

Instructional strategies, program organization and theories of literacy in Reading and Language Arts for elementary school children.
Prereq.: ED 305. 2.75 GPA 3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe phonological awareness, the connection between phonological awareness and reading achievement, and the instructional progression of phonological awareness.
2. Examine critical debates within the field of literacy instruction and develop a rationale for positions taken on stated issues.
3. Acquire, integrate and implement skills as a beginning teacher that demonstrate transfer of knowledge from theory to practice.
4. Distinguish planning strategies that demonstrate the ability to acquire and implement multi-cultural, gender fair inclusive learning tasks and assessments.
5. Interpret national, state and local standards to build a context of knowledge that supports effective teaching and learning strategies.

ED 409 Assessment and Integration in Literacy Instruction

Advanced Reading and Language Arts instructional methods including literacy across the curriculum and assessment and interventions.
Prereq.: ED 408, 2.75 GPA 3 Cr. Fall | Spring

Student Learning Outcomes

1. Compare and contrast formative and summative literacy assessments.
2. Administer and interpret assessments including running records, oral reading fluency rate, high frequency words, stages of writing, and orthographic development to improve literacy education.
3. Demonstrate the ability to administer a variety of literacy assessments to use for whole group and small group lesson planning.
4. Differentiate instruction by grouping students, choosing appropriate texts and teaching reading strategies to meet the various needs of students.
5. Create a comprehension task board to be utilized during guided reading.
6. Produce rubrics to specify literacy objectives.
7. Distinguish the difference between the writing process and the stages of writing, as well as creating meaningful writing lessons within the curricular scope and sequence.
8. Evaluate and extrapolate daily work, observation, and assessment information to analyze problem areas for struggling readers and determine appropriate interventions.

ED 411 Instructional Science

Methodology, Assessment, Commercially Available Science programs, the needs of diverse learners, and Issues of Curriculum, and State and Discipline Standards in Elementary Science Instruction.
Prereq.: ED 305; SCI 226; SCI 227: 2.75 GPA 3 Cr. Fall | Spring

Student Learning Outcomes

1. Select, adapt, and design a science lesson or learning experience that addresses a state science standard and employs teaching methods that, according to research, are among the most effective means to help learners reach the standard.
2. Select appropriate resources to teach a science

objective.
3. Design an assessment that evaluates learner mastery of a science objective.
4. Implement hands-on science lessons with learners and evaluate lesson effectiveness.

ED 412 Instructional Social Studies

Methodology, assessment, the needs of diverse learners, approaches to inquiry, and issues of curriculum, purpose and democratic classrooms in elementary social studies programs.
Prereq.: ED 305; 2.75 GPA 3 Cr. Fall | Spring

Student Learning Outcomes

1. Generate conceptions of what it means to teach social studies, including critical debates within the field and develop rationale for positions taken on stated issues.
2. Synthesize data that demonstrates how assessment informs instruction and implement a variety of assessment strategies.
3. Summarize data from global news and information resources and interpret personal and social biases.
4. Distinguish planning strategies that demonstrate the ability to acquire and implement multi-cultural, gender fair inclusive learning tasks and assessments that speak to social and geo-political issues.
5. Support students as they collect and classify historical knowledge for the purpose of developing a context for learning world history and cultural geography.

ED 414 Foundations in Education

Exploration and critical analysis of education as a political endeavor within particular historical and sociological contexts.
Prereq.: ED 315; 2.75 GPA; NES Basic Skills Test or equivalent 3 Cr. Fall | Spring

Student Learning Outcomes

1. Explore contemporary and historical issues in American education, including the nature and purpose of schooling, the relationship between race, class, gender and educational achievement, school reform and the rights and responsibilities of teachers and students.
2. Apply critical thinking skills to rethink our education as a political endeavor within particular historical and sociological contexts.
3. Identify the current education issues with WHY aspects of education and offer positive aspects for future U.S. education.
4. Integrate the professional teaching knowledge into different scenarios and explore the best practice to answer each different scenario.

ED 416 Organization in the Middle School

Orientation to middle school and middle grades classroom environments. Management, organization, and instruction procedures appropriate to the development needs of early adolescents in pluralistic society.
Prereq.: ED 200, ED 310, ED 315 3 Cr. Fall | Spring

Student Learning Outcomes

1. Describe the basic physical, psychosocial (social and emotional), intellectual and moral characteristics of early adolescents.
2. Demonstrate capacity to be continuing inquirers into the developmental processes of early adolescence.
3. Develop an understanding of developmentally responsive curricular, instructional, and assessment strategies.
4. Develop an understanding of the developmentally responsive rationale for cooperative, individualistic and competitive goal structures.
5. Demonstrate their capacity to plan the teaching/learning process to facilitate early adolescent development.

ED 417 Instructional Methods in Emerging Literacy K-4

Theories of literacy development, instructional methodologies, and assessment tools which creates a literacy curriculum that addresses the needs of diverse learners in the primary grades. Permission required.
Coreq.: ED 418, ED 419 4 Cr. Fall | Spring

Student Learning Outcomes

1. Compare and contrast formative and summative literacy assessments.
2. Administer and interpret developmentally appropriate assessments in the early grades, including running records, oral reading fluency rate, high frequency words, stages of writing, and spelling, to improve literacy development.
3. Demonstrate the ability to evaluate a variety of literacy assessments to use for whole group and small group lesson planning.
4. Distinguish when it is necessary to scaffold children+s reading and writing using a balanced approach to instruction in the early grades.
5. Support emergent, beginning, and fluent readers

and writers by incorporating phonemic awareness and phonics instruction into a balanced reading program.
6. Differentiate instruction by grouping students, choosing appropriate texts and teaching reading strategies to meet the various needs of students.
7. Expand children+s ability to become strategic readers using comprehension skills.
8. Teach and build upon children+s word knowledge and prior experiences.
9. Distinguish the difference between the writing process and the stages of writing, as well as creating meaningful writing lessons within the curricular scope and sequence.
10. Evaluate and extrapolate daily work, observation, and assessment information to analyze problem areas for struggling readers and determine appropriate interventions.

ED 418 Instructional Methods in Math/Sci/SS K-4

Facilitating significant explorations and actions on the world through the use of appropriate mathematical, scientific inquiry and information gathering tools for K-4 teachers. Permission required.
Coreq.: ED 417, ED 419 3 Cr. Fall | Spring

Student Learning Outcomes

1. Select, adapt, and design math, science, and social studies lessons or learning experiences that address state standards and employ teaching methods that, according to research, are among the most effective means to help learners reach the standard.
2. Select appropriate resources to teach math, science, and social studies objectives.
3. Design assessments that evaluate learner mastery of math, science, and social studies objectives.
4. Implement math, science, and social studies lessons with learners and evaluate lesson effectiveness.

ED 419 Organization and Management in Kindergarten/Primary Classroom

Development of appropriate practices, organization, management in kindergarten/primary classroom environments. Emphasis on child centered learning. Permission required.
Coreq.: ED 417, ED 418 2 Cr. Fall | Spring

Student Learning Outcomes

1. Describe what a well-managed and a poorly managed classroom looks like and identify contributing variables.
2. Articulate a personal philosophy of organization and management that is grounded in theory and research.
3. Articulate the precepts of multiple theorists and theories of classroom organization and management.
4. Organize curriculum, manage instructional time and space, and plan for interaction with students.
5. Implement strategies that promote a well-managed classroom.
6. Use a variety of instructional modes.

ED 420 Elementary Student Teaching I

Supervised teaching for students seeking K-6 or B-3 licensure. Students enrolled in 420 during fall semester are expected to participate in the fall workshop week (prior to the beginning of school) at their student teaching site.
Prereq.: ED 200, CFS 200 or SPED 200, 2.75 GPA, Passing Scores on NES Basic Skills tests or equivalent.
Coreq.: 3-6 Cr. Fall | Spring

Student Learning Outcomes

1. Design and implement lesson plans in literacy, math and social studies that promote student engagement and learning and meet appropriate state and local standards.
2. Implement classroom management and organization strategies that promote responsibility, self-discipline, independence, collaboration and a healthy classroom community.
3. Utilize various assessment and evaluation tools to assess and monitor the learning of individual students and of the class as a whole.
4. Collaborate with other professionals and implement co-teaching strategies as appropriate, to better meet the needs of all students.
5. Modify teaching strategies to better meet the needs of individual children particularly English Language Learners and students with Special Needs.
6. Demonstrate professional characteristics including punctuality, confidentiality, flexibility, cooperation, enthusiasm, and responsibility.
7. Communicate clearly and effectively with students, parents and other professionals both orally and in writing.

ED 421 Foundations of Education

Historical, philosophical, political, ideological, and sociological issues and dimensions of American education. Education in a democracy, issues of equity, constitutional considerations, and

development of an educational philosophy.
Prereq.: ED 300, CPSY 361, HURL 497 2 Cr. Fall | Spring

Student Learning Outcomes
1. Acquire and reinforce elements that allow students to understand the strong influence of community and family values and how they affect the learning process.
2. Reflect on issues of race, gender and ethnicity in multicultural classrooms.
3. Design meaningful materials and lessons that incorporate elements of social justice, fairness and equality.
4. Create a community of learners in which students can interact, share and work with a sense of independence, creativity and cooperative learning.
5. Develop oral skills to prepare and present lessons and presentations in a professional manner.
6. Motivate students to work in teams and share ideas and experiences that allow them to feel and be part of an educational community.
7. Reflect on the role and responsibilities of teachers and how they influence, change and affect the life of the students.
8. Sensitize and make aware the students of how they can detect child abuse, neglect and discrimination, and bullying in their classrooms.

ED 422 Elementary Student Teaching II

Supervised teaching for students seeking K-8 licensure. Students enrolled in 422 during fall semester are expected to participate in the fall workshop week (prior to the beginning of school) at their student teaching site.
Prereq.: ED 407, ED 408, ED 411, ED 412, ED 420; 2.75 GPA Coreq.: 6-9 Cr. Fall | Spring

Student Learning Outcomes
1. Design and implement lesson plans that promote student engagement and learning and meet appropriate state and local standards in all elementary content areas.
2. Implement classroom management and organization strategies that promote responsibility, self-discipline, independence, collaboration and a healthy classroom community.
3. Utilize various assessment and evaluation tools to assess and monitor the learning of individual students and of the class as a whole.
4. Collaborate with other professionals and implement co-teaching strategies as appropriate to better meet the needs of all students.
5. Modify teaching strategies to better meet the needs of individual children particularly English Language Learners and students with Special Needs.
6. Demonstrate professional characteristics including punctuality, confidentiality, flexibility, cooperation, enthusiasm, and responsibility.
7. Communicate clearly and effectively with students, parents and other professionals both orally and in writing.

ED 423 Topics in Education

Intensive study of a special topic in education. May be repeated up to 3 credits.
Coreq.: 1-3 Cr. DEMAND

ED 428 Children's Literature in Pre-K - Grade 3 Classroom

Children's literature Birth through age 8. Locate, evaluate and select high-quality children's literature to be used for a variety of purposes with children birth through age 8. 2.75 GPA requirement.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Build a knowledge base related to selecting and using literature appropriate for birth through age eight.
2. Select and evaluate quality children's literature, including diverse literature.
3. Demonstrate knowledge of genre, authors, illustrators, and literary elements.
4. Demonstrate skills in oral reading and storytelling.
5. Demonstrate skills in planning a variety of response strategies.
6. Demonstrate knowledge of strategies to promote home/school partnerships.
7. Demonstrate knowledge of and ability to promote language development through literature.

ED 431 Curriculum, Instruction and Assessment

Curriculum, instruction and assessment in the PreK-12 setting. Inclusive and responsive approaches for middle level and high school classrooms. Teacher identity; creating safe learning communities; complex, student-centered lesson design with varied instruction; interdisciplinary curricula; and authentic assessment.
Prereq.: ED 300, CPSY 361, Completion of NES Basic Skills Tests or equivalent 2 Cr. Fall | Spring

Student Learning Outcomes
1. Examine the role of racial, gender, and professional identity in the work of teachers.

2. Employ multiple methods for learning about students backgrounds, interests and lives.
3. Describe inclusive and responsive teaching at the middle and high school levels.
4. Delineate the characteristics of a participatory democratic classroom environment.
5. Employ various communication and relationship-building strategies to be used with students, peers, school employees and parents/community members.
6. Apply language development and literacy knowledge to teaching in specific content areas.
7. Create inclusive and equitable curricula and assessments based on learner needs.
8. Use a variety of interdisciplinary instructional strategies based on learner needs.

ED 441 Integrating Theory and Practice:Inclusive & Responsive Teaching for All

Merging theory and practice for developing inclusive and responsive curriculum, instruction and assessment in the pre K-12 setting during an in-depth field experience. Active involvement in classrooms includes working with ESL, special education and/or other historically under-served students.
Prereq.: ED 300; CEEP 361; IM 422 Coreq.: ED 421, ED 431 1 Cr. Fall | Spring

Student Learning Outcomes

1. Observe and analyze the culture of the school and classroom.
2. Create safe, respectful, democratic cultures and learning communities in the classroom.
3. Apply communication and relationship-building strategies with students, peers, school employees, and parents/community members.
4. Implement inclusive and equitable curricula, assessment, and instruction based on diverse learner needs.
5. Apply language development, literacy knowledge, and skills to instructional activities in a content area.
6. Participate with other faculty on interdisciplinary curriculum development and team teaching.

ED 451 Literacy in the Content Areas

Literacy applied to content area learning: instructional strategies to develop vocabulary and promote comprehension, assessment techniques to guide instructional planning, and dispositions for content literacy professionals.
Prereq.: ENGL 460; SPED 425 Coreq.: ED 421/521, ED 431/531, ED 441/541 2 Cr. Fall | Spring

ED 457 Issues in Bilingual/Bicultural Education

Examines current issues in Bilingual/Bicultural education from historical, political, and social, and dimensions. This course prepares future ESL and Bilingual teachers to examine current issues and curriculum decisions that affect the bilingual/bicultural student.
3 Cr. DEMAND

Student Learning Outcomes

1. Describe, deconstruct and reconstruct chief theories of social dominance.
2. Specify and analyze primary connections between schooling and the process of colonization.
3. Articulate and identify reveling concepts of assimilation and acculturation.
4. Analyze and synthesize chief concepts of the different models of Bilingual/bi-cultural programs.
5. Analyze and describe relevant concepts and facts found in review the literature on Bilingual/bi-cultural education.

ED 458 Literacy for L-2 Learners

Socio-psycholinguistic process of second-language literacy learning. Speech and print relationships, literacy emergence, strategies for reading/writing development and integration of language and literacy across the curriculum, K-12.
3 Cr. Summer

Student Learning Outcomes

1. Articulate and incorporate reveling concepts of second language literacy.
2. Understand foundational theories related to practice and materials used in the classroom.
3. Demonstrate the ability to develop and implement effective vocabulary strategies that help students understand words including domain-specific content words.
4. Communicate an understanding of and demonstrate the ability to accommodate the literacy/learning needs of readers of varying proficiency and developmental levels and linguistic backgrounds.
5. Demonstrate selection and implementation of a wide variety of before, during, and after reading comprehension strategies that develop reading and metacognitive abilities.
6. Demonstrate appropriate applications of a wide variety of instructional strategies that promote student comprehension in understanding text, content materials, lectures, and demonstrations.

ED 459 Critical Pedagogy

Intended to introduce educators to current issues/concepts related to critical pedagogy. This course will examine theoretical frameworks and introduce current research in the field of critical pedagogy. Educators will examine how critical pedagogy as a philosophy impacts learners at all levels especially those from diverse populations.
3 Cr. DEMAND

ED 460 Teaching English Language Learners in K-12

Theory and methods for English Language Learners and bilingual education for non-ESL and non-bilingual teachers. Issues for English Language Learners and instructional strategies.
Prereq.: ED 300 2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Articulate and incorporate reveling concepts of second language literacy.
2. Analyze and synthesize chief concepts of the learning process.
3. Identify and relate to relevant principles of how people function in groups, and learn by themselves.
4. 5. Specify and analyze primary connections between various teaching and learning strategies in second language literacy.
6. Describe, deconstruct and reconstruct chief theories of learning how to read and write in second language literacy.

ED 462 Teaching English Learners K-6

Strategies for teaching English language learners K-6. Impact of identity development, culture, community, and personal experiences on language development; use of technology in language learning.
Prereq.: 2.75 GPA, ED 200, ED 315, NES Basic Skills test or equivalent Coreq.: ED 305 Cr. Fall | Spring

Student Learning Outcomes

1. Employ appropriate strategies of second language acquisition to students whose first language is not English.
2. Analyze the power of language to engage students in self-expression, identity development and planned classroom activities.
3. Use literature review to analyze how learning is influenced by a variety of factors, such as individual experiences, talents, prior learning, language, culture, family, community, etc.
4. Integrate students' personal experiences with examples and issues from diverse cultures that may be in their community or in their readings.
5. Develop classroom activities that compare diverse community or cultural norms.
6. Connect classroom activities to students in the classroom and students with other cultural experiences.
7. Communicate multiple perspectives to the discussion of subject matter, including attention to a student's personal, family, and community experiences and cultural norms.
8. Analyze how cultural and gender differences can impact communication in the classroom.
9. Apply appropriate technology to assist and empower learners with diverse backgrounds, characteristics, and abilities.

ED 466 Student Teaching for 5-12 Licensure

Supervised teaching for students with majors in Communication Arts and Literature, Health, Mathematics, Sciences, Social Studies and Technology leading to 5-12 licensure.
Prereq.: ED 421 Coreq.: 3-12 Cr. Fall | Spring

Student Learning Outcomes

1. Design and implement lesson that promote student engagement and learning and meet appropriate state and local standards within the content areas being taught.
2. Implement classroom management and organization strategies that promote responsibility, self-discipline, independence, collaboration and a healthy classroom community.
3. Utilize various assessment and evaluation tools to assess and monitor the learning of individual students and of the class as a whole.
4. Collaborate with other professionals and implement co-teaching strategies as appropriate to better meet the needs of all students.
5. Modify teaching strategies to better meet the needs of individual children particularly English Language Learners and students with other Special Needs.
6. Demonstrate professional characteristics including punctuality, confidentiality, flexibility, cooperation, enthusiasm, and responsibility.
7. Communicate clearly and effectively with students, parents and other professionals both orally and in writing.

ED 467 Student Teaching for PreK-12 Licensure

Supervised teaching for students with majors in art, languages, music, physical education, and TESL

leading to Pre K-12 licensure.
Prereq.: ED 421 Coreq.: 3-12 Cr. Fall | Spring

ED 482 Multicultural Child

Learning styles of Afro-American, Native American, Asian-American and Latino-American children.
3 Cr. DEMAND

Student Learning Outcomes

1. Identify cultural learning styles of children of color.
2. Build a cultural responsive learning climate in the classroom that respects diversity.
3. Describe the cultural values and child-rearing practices of African-American, Latino-American, Asian-American, and First People families.
4. Identify issues and concerns biracial children bring to the classroom.
5. Analyze intercultural miscommunication using cultural and linguistic concepts.

ED 483 Black English: Teaching Black Children to Read

How Black English courses problems when Black and Latino students start to read and write.
3 Cr. DEMAND

Student Learning Outcomes

1. Articulate the difference between Black English/Ebonic grammatical features with that of standard English grammatical features.
2. Identify cultural elements of style in oral traditions associated with African American culture.
3. Articulate the different sides of the argument surrounding Ebonics being taught in the classroom.
4. Describe how racism has played a major role in keeping the general public ignorant about Black English.
5. Respond to concerns raised by use of Black English in the classroom.

Theatre (TH)

TH 148 Acting for Everyone

Expressiveness through the crafts of acting. Exploring self-awareness, body dynamics, vocal dynamics, inner states of being and outer states of expression.
3 Cr. GOAL AREA 6: HUMANITIES AND FINE ARTS

TH 180 Analysis of Dramatic Literature

Analysis of plays: dramatic theory using various research strategies, plot structures, styles, genres, characters, themes, etc.
Coreq.: Cr. Fall

Student Learning Outcomes

1. Apply various research strategies to find information about plays and playwrights.
2. Describe various styles of drama and identify scripts that demonstrate the styles.
3. Describe various genres of drama and select the appropriate genre for scripts.
4. Describe and analyze the elements of drama and apply them to scripts.
5. Describe and identify the appropriate plot structures for plays.

TH 198 Rhetorical and Analytical Writing for Theatre

Analytical reading and writing using scripts. Significant research component. Meets core writing requirement. Prerequisite for theatre majors and minors. Permission of instructor.
4 Cr. Fall | Spring GOAL AREA 1: COMMUNICATE ORALLY & IN WRITING

TH 225 Theatre Practicum I

Practical application of theatre skills in stage management, or technical crews (costume, scenic, lighting, properties, sound, stagehands, etc.). Must complete 50 hours of crew work.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Practice safety techniques in operating machinery.
2. Build or complete theatre projects creatively and in a timely manner.
3. Collaborate effectively with design teams and other technicians.

TH 231 Introduction to Theatre

Exploration of theatre history and theatre as an art form that includes participation in a broad range of theatrical experiences, including crew work and performances.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

TH 237 Stagecraft

Study and application of technical theatre procedures
Coreq.: Cr. Spring

Student Learning Outcomes
1. Describe the elements of theatrical design as they apply to the concepts and meaning of a script.
2. Identify each member's role within a collaborative theatrical production.
3. Employ various construction techniques used in creating scenery for theatrical productions.
4. Analyze construction plans for material acquisition and cost estimation.
5. Communicate effectively within a collaborative theatrical production.
6. Practice appropriate safety procedures when using common materials, fabrication tools and theatre equipment for the desired effect of theatrical design.

TH 238 Costume Construction
Theory and application of theatrical costume construction techniques and procedures.
Coreq.: Cr. Fall

Student Learning Outcomes
1. Apply basic techniques for using sewing equipment, tools, materials, terminology and procedures standard in professional costume studios.
2. Practice and apply both hand and machine stitching techniques.
3. Analyze and apply how to use patterns.
4. Prepare a resume and collect artifacts for a portfolio.

TH 240 Stage Make-up
Theory and practice of make-up techniques.
Prereq.: TH 198 3 Cr. Odd Spring

Student Learning Outcomes
1. Analyze facial structure.
2. Identify and interpret makeup techniques.
3. Design and apply theatrical makeup.
4. Evaluate each other's approaches to the effectiveness of theatrical makeup.

TH 242 Active Collaboration
Methods, history and practice of collaborative and interdisciplinary creation in the arts.
3 Cr. Fall | Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

TH 245 History of Costume and Scenic Design
Dress, decor and architecture and their relation to theatrical design from classical time to the present.
Prereq.: TH 198, TH 235 3 Cr. Even Fall

Student Learning Outcomes
1. Identify and discuss significant shifts and trends in the histories of scenic and costume design for the stage.
2. Analyze the relationship of theatrical design to concurrent historic trends in architecture, fashion, and the visual arts.
3. Employ appropriate research and analysis skills to communicate, through writing and images, a thoughtful synthesis of design, history, and dramatic literature.

TH 248 Acting Foundations
Basic acting skills and inner resources through exercises, improvisations, and emphasis on scenes from plays.
3 Cr. Fall

Student Learning Outcomes
1. Improve improvisational skills.
2. Employ physical movement techniques while acting.
3. Use personal emotional experiences and sense memory as techniques in acting.
4. Apply new skills to the process of embodying a character.

TH 255 Voice and Movement
Vocal and movement techniques for acting on the stage. Development of basic flexibility, coordination, and stamina. The function of breathing, projection, and clarity as well as awareness of rhythm, space, kinesthetic response.
3 Cr. Spring

Student Learning Outcomes
1. Coordinate effectively between movement and sound.
2. Demonstrate physical stamina and flexibility.
3. Support the voice through correct breathing techniques.
4. Use clear articulation and strong projection in voice.
5. Apply the use of space and rhythm to performance.

TH 258 Practical Creativity
Current theories and practice surrounding creativity. Engages students in self discovery and experiential learning.
Coreq.: Cr. Spring GOAL AREA 6: HUMANITIES AND FINE ARTS

TH 270 American Musical Theatre

The development of the American musical theatre in relation to American cultural history.
3 Cr. Fall GOAL AREA 5: HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES | GOAL AREA 6: HUMANITIES AND FINE ARTS

TH 325 Theatre Practicum II

Taking responsibility as a crew chief in a technical area (scenic, costumes, properties, master electrician, stage management, etc.). Must complete 60 hours of crew work.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Prioritize and organize tasks 2. Collaborate effectively with designers and crew members
3. Meet deadlines by creatively completing all projects

TH 326 Theatre Practicum: Acting

Acting in a theatre production.
1 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze the character(s) they are portraying.
2. Collaborate with the director, designers, other actors, and various technical crews.
3. Integrate acting techniques from courses, other actors, and their own experiences in acting.

TH 349 Principles of Directing and Production

Selecting, analyzing, casting and rehearsing plays for production. Permission of instructor.
Prereq.: TH 180, TH 231, TH 148 or TH 248 3 Cr. Fall

Student Learning Outcomes

1. Analyze scripts using appropriate directing methods and terminology (and express it in writing).
2. Use appropriate casting strategies.
3. Direct actors in scenes using appropriate directing methods and terminology.
4. Use appropriate techniques to stage actions and events.
5. Demonstrate ability to compose physicality of human behavior on stage.
6. Demonstrate ability to utilize stage space in order to build functional and effective compositions.

TH 351 Creative Projects

Projects in all areas of theatre. Permission of department. Theatre majors only.
Coreq.: 1-9 Cr. Fall | Spring

Student Learning Outcomes

1. Perform as a vocal coach or choreograph dance or special movements for a mainstage (usually faculty directed) theatre production.
2. Analyze the creative process and what they learned from the experience.
3. Defend (orally) and evaluate the project for theatre program faculty and staff.

TH 352 Creative Projects

Projects in all areas of theatre. Permission of department. Theatre majors only.
Coreq.: 1-9 Cr. Fall | Spring

Student Learning Outcomes

1. Perform a major role in a mainstage (usually faculty directed) theatre production.
2. Analyze the creative process and what they learned from the experience.
3. Defend (orally) and evaluate the project for theatre program faculty and staff.

TH 353 Creative Projects

Projects in all areas of theatre. Permission of department. Theatre majors only.
Coreq.: 1-9 Cr. Fall | Spring

Student Learning Outcomes

1. Direct a theatre production for the theatre program mainstage season or as a supplement to the season.
2. Analyze the creative process and what they learned from the experience.
3. Defend (orally) and evaluate the project for theatre program faculty and staff.

TH 354 Creative Projects

Projects in all areas of theatre. Permission of department. Theatre majors only.
Coreq.: 1-9 Cr. Fall | Spring

Student Learning Outcomes

1. Design costumes for a mainstage (usually faculty directed) theatre production.
2. Analyze the creative process and what they learned from the experience.
3. Defend (orally) and evaluate the project for theatre program faculty and staff.

TH 355 Creative Projects

Projects in all areas of theatre. Permission of department. Theatre majors only.
Coreq.: 1-9 Cr. Fall | Spring

Student Learning Outcomes
1. Design scenery for a mainstage (usually faculty directed) theatre production.
2. Analyze the creative process and what they learned from the experience.
3. Defend (orally) and evaluate the project for theatre program faculty and staff.

TH 356 Creative Projects
Projects in all areas of theatre. Permission of department. Theatre majors only.
Coreq.: 1-9 Cr. Fall | Spring

Student Learning Outcomes
1. Design lighting for a mainstage (usually faculty directed) theatre production.
2. Analyze the creative process and what they learned from the experience.
3. Defend (orally) and evaluate the project for theatre program faculty and staff.

TH 357 Creative Projects
Projects in all areas of theatre. Permission of department. Theatre majors only.
Coreq.: 1-9 Cr. Fall | Spring

Student Learning Outcomes
1. Design sound and record cues for a mainstage (usually faculty directed) theatre production.
2. Analyze the creative process and what they learned from the experience.
3. Defend (orally) and evaluate the project for theatre program faculty and staff.

TH 358 Creative Projects
Projects in all areas of theatre. Permission of department. Theatre majors only.
Coreq.: 1-9 Cr. Fall | Spring

Student Learning Outcomes
1. Perform the duties and responsibilities of a Stage Manager for a mainstage (usually faculty directed) theatre production.
2. Analyze the creative process and what they learned from the experience.
3. Defend (orally) and evaluate the project for theatre program faculty and staff.

TH 359 Creative Projects
Projects in all areas of theatre. Permission of department. Theatre majors only.
Coreq.: 1-9 Cr. Fall | Spring

Student Learning Outcomes
1. Write a play or perform as dramaturg for a mainstage (usually faculty directed) theatre production.
2. Analyze the creative process and what they learned from the experience.
3. Defend (orally) and evaluate the project for theatre program faculty and staff.

TH 385 Dramaturgy and Research
Research elements of theatrical texts in production. Participation in production required.
Coreq.: TH 225 or TH 325 or TH 326 Cr. Even Fall

Student Learning Outcomes
1. Assemble and communicate relevant research materials using professional dramaturgical standards.
2. Articulate the relationship between a theatrical text-practice and its larger socio-historic circumstances.
3. Adapt and conceptualize primary research findings for the purposes of contemporary production.

TH 390 Stage Management
Theories and practices to effectively manage a theatrical production effectively.
3 Cr. Odd Spring

Student Learning Outcomes
1. Analyze a dramatic text for a productions physical needs.
2. Organize a dramatic text for utilization as a production prompt book.
3. Utilize appropriate language and procedures in communicating with production personnel.

TH 444 Internship
Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
Coreq.: 1-16 Cr. Fall | Spring | Summer

TH 448 Advanced Acting Techniques
Specific styles of acting, such as period styles, Suzuki, outside-in, improvisation, etc. May be repeated up to 6 credits.
Prereq.: TH 248 3 Cr. DEMAND

Student Learning Outcomes
1. Perform acting techniques from a specific acting style.
2. Analyze characters using techniques from a specific acting style.
3. Develop body awareness for movement style.
4. Research periods or techniques of acting.

TH 450 Advanced Voice and Movement
Advanced development of vocal and physical techniques in creating a character, including dialect and character voices.
Prereq.: TH 248, TH 250, TH 260 3 Cr. Odd Spring

Student Learning Outcomes
1. Demonstrate improvement in strength, flexibility, coordination and balance.
2. Demonstrate strong coordination between movement and sound.
3. Demonstrate strong physical awareness and improvisation skills through affective use of space, movement, rhythm, sound and action.
4. Demonstrate great control of proper breathing, powerful work of diaphragm for support of the voice and affective use of body's many natural resonators.
5. Demonstrate reinforced articulation and projection of voice.
6. Use technique of analysis of poetical texts for a variety of dramatic texts.
7. Use technique of 'physical centers'.
8. Identify and use a set of physical and vocal archetypes that are being stored in their own body.
9. Integrate all skills learned in this class, create and perform a solo performance.

TH 465 Topics in Theatre
Selected subjects in theatre such as technical processes, acting styles, playwrights, and dramaturgy. May be repeated without repetition of content to a maximum of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Research mannerisms and conventions of various styles of acting.
2. Perform scenes from classical Western drama or non-Western drama.
3. Evaluate their own and others' scenes in terms of acting style and playwright's message.
4. Analyze the audiences (societies or cultures) for whom the plays were intended.
5. Describe the cultural and historical context of plays written by significant women playwrights.
6. Compare/contrast themes and structure of plays written by women.
7. Write about and discuss dramatic theories of women playwrights.
8. Describe contributions of women playwrights to theatre studies.
9. Demonstrate familiarity with household and professional (acid and/or fiber-reactive) dyes and succesfully execute an advanced dye techniques (tie-dye, ombre or itajimi)..
10. Successfully and realistically age and distress a garment.

TH 479 One-Act Production
Students work collaboratively to create a fully-produced performance for the public.
Prereq.: TH 349 Coreq.: Cr. Odd Spring

Student Learning Outcomes
1. Assume responsibility for and effectively perform a significant artistic, technical, or managerial role in the creation of a theatrical performance.
2. Engage in pre-production activities, such as seeking rights, auditioning and casting, marketing, etc.
3. Collaborate as a production team, including designers, stage managers, actors, etc.
4. Reflect on the quality of their own and other students' work.

TH 485 Styles and Genres
Analysis of various elements of a dramatic work in production. Participation in production work required.
Coreq.: TH 325 or TH 326 3 Cr. Odd Fall

Student Learning Outcomes
1. Identify and compare the core elements of a style or genre within theatrical texts and works of allied art media.
2. Articulate the relationship of a theatrical style or genre to contemporaneous schools of thought or political ideologies.
3. Analyze a theatrical text from the perspective of diverse methodologies and critical theories.

TH 496 Summer Theatre
Theatre production for advanced students. Experience in acting, directing, costuming, construction, promotion, lighting and other disciplines during the summer season. Registration by application only.
Coreq.: 1-6 Cr. Summer

Student Learning Outcomes

1. Participate in a professional summer theatre program as an actor, designer, technician, management administrator, etc.
2. Apply theatre skills and abilities in a summer production season.
3. Collaborate and network with theatre workers outside of the university.

Traffic Safety Education (TSE)

TSE 430 Seminar: Topical Traffic Safety

Contemporary traffic safety issues, such as accident prevention and community involvement. May be repeated topically.
Coreq.: 1-3 Cr. DEMAND

TSE 440 Driving Task Analysis

Risk perception and risk management, the decision making process, and the influencing factors of attitude, motivation and chance as related to accident causation. Defensive driving principles and crash avoidance tactics explored.
3 Cr.

TSE 444 Internship

Internships are offered at the discretion of departments. Course number and number of credits are determined by the departments. Contact departmental offices for further information. 16 credits maximum in any one program.
0 Cr. Fall | Spring | Summer

TSE 450 Methods of Classroom Instruction

Basic analysis of the driving task. Teaching techniques, applications and methodology of classroom high school driver education. Defensive driving principles and theory. Classroom laboratory teaching included.
3 Cr. Fall | Spring | Summer

TSE 453 Emergency Driving Techniques

Organization and administration of program development. All phases of emergency driving instruction.
1 Cr. DEMAND

TSE 455 Workshops: Special Topics Traffic Safety

Specific strategies for promoting quality driver education will be identified. May be repeated three times.
0 Cr. DEMAND

TSE 456 Improving Driver Education Instruction

Assists driver education instructors to improve the driving of their students. Risk management.
3 Cr. DEMAND

TSE 464 Workshop: Kids Teaching Kids

Role of an adviser in the "Kids Teaching Kids" elementary traffic safety program. The influence of peers, development of healthy attitudes and making responsible decisions. Preparation of sixth grade peer leaders.
1 Cr. Spring

TSE 470 Methods of In Car Instruction

Application of educational techniques in the laboratory phase of driver education. Laboratory teaching experience included.
Coreq.: AVIT 480-580 3 Cr. Fall | Spring

TSE 480 In Car Instruction Practicum

Driver education principles of in-car teaching techniques. Behind the wheel laboratory teaching experience.
Coreq.: AVIT 470-570 1 Cr. Fall | Spring

TSE 490 Issues in Driver Education

History and origins of high school driver education, recent trends and issues affecting high school driver education programs. Role-played by public and private agencies and organizations in setting expectations and standards for driver education. Administrative tasks required of the Driver Education coordinator. Internet chat activity and self paced readings and writings required.
Prereq.: TSE 440-540, TSE 450-550, TSE 470-570, TSE 480-580, or DE licensed 3 Cr. Fall | Spring

Graduate Courses

500-800 level

Accounting (ACCT)

ACCT 501 Credit by Arrangement
Credit by Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ACCT 505 Fraud and Forensic Accounting
Principles of detecting fraudulent financial reporting and occupational fraud.
Prereq.: ACCT 292 3 Cr. DEMAND

Student Learning Outcomes
1. Judge abuses of the flexibility inherent in accounting rules in financial reports.
2. Evaluate fraud investigation techniques, how and why occupational fraud is committed, and how fraudulent conduct can be deterred.
3. Practice fraud investigation techniques through projects requiring them to conduct a fraud investigation.
4. Employ professional writing and business skills through class activities and assignments.
5. Show their ability to work effectively in groups through a group project.

ACCT 550 Personal Taxation
Federal income taxation of individuals including gifts, estates, and trusts.
3 Cr. Fall

ACCT 551 Business Taxation
Federal income taxation of business organizations including corporations and partnershps. Property transactions and other business topics.
Prereq.: ACCT 292, ACCT 450 3 Cr. Fall | Spring

ACCT 570 Securities and Exchange Commission Accounting and Reporting
Corporate governance, SEC rules and issues regarding financial reporting and investor communication.
Prereq.: ACCT 292 3 Cr. DEMAND

Student Learning Outcomes
1. Identify obligations public companies have with regard to SEC rules, corporate governance, and investor communication.
2. Evaluate responsibilities of various groups within corporations necessary to comply with financial reporting and investor communication requirements.
3. Perform financial research and show professional business writing skills.

ACCT 581 Advanced Accounting
Accounting for business combinations, consolidated financial statements, and partnerships.
Prereq.: C or better in ACCT 382 3 Cr. Fall | Spring

ACCT 584 Governmental and Not-For-Profit Accounting
Fund accounting as applied to governmental and not-for-profit entities.
3 Cr. Fall

ACCT 585 Corporate Governance
Develop an understanding of corporate organizations and responsibilities of parties within the corporation. Gain an understanding of Sarbanes Oxley. Develop an understanding of corporate topics and research necessary to communicate and coordinate financial reporting.
Prereq.: ACCT 292 plus 90 credits completed 3 Cr. DEMAND

Student Learning Outcomes
1. Describe corporate organizations and recall the relevant responsibilities of various parties within the corporation for overall corporate governance, financial reporting and communication to investors.
2. Distinguish the various aspects of Sarbanes Oxley that are relevant to the operation of the board of directors and audit committee, financial reporting and investor communication.
3. Identify the relevance of corporate topics reported in the financial press and perform the research necessary to relate the issues to corporate governance and financial reporting.
4. Identify the communication and coordination necessary within the corporate framework to produce timely and accurate financial reporting to investors.

ACCT 586 Financial Auditing
Nature of the audit function, nature of audit evidence, audit standards and procedures, professional ethics, and audit reports.
Prereq.: C or better in ACCT 382 3 Cr. Fall | Spring

ACCT 587 Operational Auditing

Nature of internal and operational auditing, performance of an operational audit.
Prereq.: MGMT 301, 383, FIRE 371, MKTG 320 or permission of instructor. 3 Cr. Spring

ACCT 590 Current Topics in Accounting
Current developments, trends and issues in accounting. May be repeated with different topics to a maximum of 9 credits.
Prereq.: permission of department Coreq.: 1-3 Cr. DEMAND

ACCT 591 Accounting Principles
External and internal financial reporting systems and their roles in planning, control, and evaluation of management action. (For admitted graduate students only.)
3 Cr. Fall

ACCT 593 International Accounting
Accounting theory and practice, taxation, and special reporting problems of several major industrial countries. Multinational corporate accounting problems.
3 Cr. DEMAND

ACCT 598 Business Consulting
Teams of students work as consultants to area businesses and non-profit organizations to diagnose and solve actual business problems. Written and oral report required.
Prereq.: ACCT 292, IS 242 or STAT 242, FIRE 371, MGMT 201, MKTG 220, or permission of department. 3 Cr. Fall | Spring

ACCT 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ACCT 601 Advanced Financial Accounting I
Advanced accounting theory and literature as applied to financial accounting, standard-setting, and the basic financial statements. Current and long-term assets, and current liabilities.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will describe and explain the objectives of financial reporting, the standard setting process, and the conceptual framework underlying financial accounting.
2. Students will identify sources of information and create a balance sheet, income statement, statement of stockholders' equity, and statement of cash flows under GAAP.
3. Students will measure amounts for transactions, record transactions, and describe disclosure for current assets, long-term assets, and current liabilities.
4. Students will evaluate accounting treatments and identify the best one for current assets, long-term assets, and current liability transactions.

ACCT 602 Advanced Financial Accounting II
Advanced accounting theory and literature as applied to long-term liabilities, stockholders' equity, statement of cash flows, and specialized topics.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will be able to measure amounts for transactions, record transactions, and create disclosures for long-term liabilities, convertible securities, and investments.
2. Students will be able to measure amounts for transactions, record transactions, and create disclosures for components of stockholders' equity and prepare the stockholders' equity section of the balance sheet.
3. Students will measure amounts for transactions, record transactions, and create disclosures for revenue recognition at the point of sale, before delivery, and after delivery.
4. Students will compute earnings per share for a simple and complex capital structure.
5. Students will identify sources of information and create a statement of cash flows.
6. Students will measure amounts for transactions, record transactions, and create disclosures for other specialized accounting topics.

ACCT 605 Business Seminar-Accounting
Selected topics related to accounting theory and practice. Consent of department chairperson.
3 Cr. DEMAND

ACCT 608 Advanced Accounting Information Systems
Advanced accounting transactions, microcomputer skills for the accounting environment, and the fundamentals of accounting information systems and controls.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will be able to explain, interpret, and illustrate the basic concepts and theory of accounting information systems.
2. Students will be able to use a simulation to identify the different parts of the accounting information system and accounting cycle and how these components integrate.
3. Students will be able to evaluate system designs, data theory, and data modeling.
4. Students will be able to create queries and reports using relational database software.
5. Students will be able to create spreadsheet applications for accounting tasks using advanced tools in spreadsheet software.
6. Students will be able to setup and record transactions and create useful information using accounting software.
7. Students will be able to examine business processes and identify internal control issues in an accounting information system.

ACCT 614 Advanced Auditing

Advanced auditing theory and practice, emphasizing audit standards, audit evidence, internal controls, auditors' reports and professional ethics, sampling, accountants' liability, and audit programs.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will be able to interpret and use professional auditing standards (U.S. GAAS)
2. Students will be able to examine and appraise financial and non-financial audit evidence
3. Students will be able to evaluate internal controls and incorporate the additional management responsibilities required by the current legislation and Auditing Standards.
4. Students will be able to create auditors reports
5. Students will be able to explain and demonstrate professional ethics 6. Students will be able to perform audit sampling techniques and interpret results 7. Students will be able to identify conditions that lead to frauds and recognize accountants' liability 8. Students will be able to design audit programs for financial statement audits

ACCT 682 Advanced Managerial Accounting

Advanced managerial accounting topics to evaluate performance and support decision making of the firm.
3 Cr. DEMAND

ACCT 690 Selected Topics

May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. DEMAND

ACCT 691 Enrollment Continuation

Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

ACCT 695 Temporary Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ACCT 697 Regulation

Advanced study of federal income taxation of individuals and other regulatory issues including business law, ethics, and professional and legal responsibilities.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will be able to identify, apply, and explain U.S. Federal income tax law as it relates to personal income tax returns 2. Students will evaluate business law in a variety of business situations 3. Students will assess the ethical, professional, and legal responsibilities of individuals practicing in the tax profession

ACCT 699 Master's Thesis

Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

ACCT 790 Selected Topics

May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ACCT 791 Selected Topics

May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ACCT 792 Selected Topics

May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ACCT 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ACCT 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ACCT 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

Anthropology (ANTH)

ANTH 501 Research Methods in Archaeology
Basic categories of archaeological methodology; general research, field, analytical and quantitative methods.
Prereq.: ANTH 269, ANTH 390 and/or permission. 3 Cr. Spring

ANTH 520 Aging in Culture and Society
The aging process in cross-cultural perspective, including the effects of ethnicity on the aging experience in the U.S. Application of the methods and theory of anthropology to aging.
3 Cr. DEMAND

ANTH 530 Research Methods in Archaeology
Basic categories of archaeological methodology; general research, field, analytical, and quantitative methods.
Prereq.: ANTH 230, ANTH 390 and/or permission 3 Cr. Even Summer

ANTH 531 Laboratory Methods in Archaeology
Laboratory processing, classification and analysis of archaeological materials. Laboratory methods for the artifacts and ecofacts commonly recovered from archaeological contexts.
3 Cr. Spring

ANTH 532 North American Archaeology
Native American settlement and life in North America north of Mexico from 15,000+ years ago to the recent past, based on archaeological study. Examination of major debates and ethical issues in the excavation, analysis and interpretation of North American archaeological sites.
3 Cr. Spring

ANTH 533 Archaeology of the Upper Midwest
Environmental and geological setting, history or archaeology in the region, tribal archaeology and historic preservation, and legal aspects of archaeology in the upper Midwest as well as a chronological overview of regional prehistory.
3 Cr. Spring

ANTH 547 Essentials of Forensic Anthropology
Techniques for the location, recovery and laboratory analysis of human skeletal remains including sex, age, population affinity, stature, pathology and trauma.
3 Cr. Odd Spring

Student Learning Outcomes
1. Understand and know methods in forensic archaeology including the location and recovery of buried evidence, crime scene processing, and rules for handling forensic evidence.
2. Understand criteria for evaluating the forensic relevance of discovered remains.
3. Understand skeletal biology including the structure, composition, evolution, and function of the bones of the human skeleton.
4. Understand and know the bones of the human skeleton and those features relevant to bone identification and questions of personal identity and life history.
5. Understand and know how to identify human from non-human bones.
6. Understand and know methods of estimating age, sex, population affinity, stature, pathology, and trauma from human skeletal remains.

ANTH 550 Ethnographic Research Methods
Practice and theory of ethnographic research. Research design, participant observation, interviewing, questionnaires, field note taking and management, data analysis, ethics.
Prereq.: ANTH 250, 3 additional credits or permission 3 Cr. Odd Summer

ANTH 563 Seminar
Discussion and readings in advanced topics in anthropology. A specific topic selected each time offered. May be repeated to a maximum of 6 credits.
Prereq.: ANTH 101 or permission of instructor 3 Cr. DEMAND

ANTH 572 Topics/Fieldwork in Asian Homelands or Diaspora Communities
Travel and field experience in Asian Homelands or Diaspora Communities. May be repeated with

different nations to maximum of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate knowledge of international affairs and expanded appreciation for alternative worldviews.
2. Evaluate race, ethnicity, class, and gender from a transnational perspective.
3. Examine Asian ethnicity in Asian homelands, most especially with respect to the Asian American communities of the United States.
4. Analyze the historical, economic, sociocultural, and political impacts of colonialism and Westernization in Asia.
5. Demonstrate enhanced knowledge of personal heritage acquired through visits to ancestral homelands for Asian American students.

ANTH 574 Culture and Family
Family structure and dynamics in non-Western countries. Cultural variations, historical and contemporary family patterns, relationship of family to other institutions, comparisons of non-Western and Western families.
Prereq.: ANTH 250 or SOC 160 or consent of instructor 3 Cr. DEMAND

ANTH 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ANTH 592 Field Research in Anthropology
Anthropological field methods and directed research in one of the subdisciplines of anthropology: archaeology, ethnography, linguistics, or applied anthropology.
Coreq.: 1-6 Cr. Summer

ANTH 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ANTH 630 Proseminar in Archaeology
Archaeological theory and methods of inquiry, analysis and explanation. Major historical developments in anthropological archaeology and contemporary theoretical perspectives.
3 Cr. Spring

ANTH 631 Cultural Resource Management I
Policies, laws and organizations that are the foundation of modern cultural resource management. Federal, state and tribal levels of legislation, policy and organization and public archaeology. Implementation and evaluation of professional standards in cultural resource management.
3 Cr. Fall

ANTH 632 Cultural Resource Management II
Practice of CRM archaeology, from research design to report completion. Budget preparation, evaluation of site significance, mitigation, artifact processing and analysis and professional ethics.
3 Cr. Spring

ANTH 640 Proseminar in Biological Anthropology
Major topics and theoretical issues in contemporary biological anthropology, including human genetics, human and primate evolution, contemporary primate studies and human variation.
3 Cr. Spring

ANTH 644 Internship
Internship in a professional cultural resources management setting for the purpose of obtaining experience and professional skills in the field.
Coreq.: 1-9 Cr. DEMAND

ANTH 650 Proseminar in Cultural Anthropology
Major topics and theoretical issues in contemporary cultural anthropology, including ethnographic fieldwork and the processes affecting cultural variation, stability and change.
3 Cr. Fall

ANTH 652 Technical Writing in Anthropology
Diverse forms of writing commonly required of anthropologists. Focus on writing most often required of archaeologists and other CRM practitioners.
3 Cr. Fall

ANTH 660 Topics in Applied Archaeology

Topics related to Cultural Resource Management/Applied Archaeology.
3 Cr. DEMAND

ANTH 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ANTH 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

ANTH 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ANTH 695 Temporary Workshop
Area limited and sspecific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ANTH 699 Thesis

Coreq.: 1-6 Cr. Fall | Spring

ANTH 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ANTH 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ANTH 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ANTH 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ANTH 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ANTH 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

Applied Clinical Research (ACR)

ACR 620 Applied Anatomy, Physiology, and Pathophysiology
Major human organ systems. Cellular structure, function, and metabolism. Development of medical devices and combination products to diagnose, mitigate, or cure pathological conditions.
4 Cr.

ACR 622 Lifecycle of the Clinical Product
Phases of the medical-product-development life cycle.
2 Cr. Fall | Spring | Summer

ACR 624 Biostatistics for Clinical Trials
Statistical tools used in the design, monitoring, and analysis of clinical studies. FDA and ICH guidance.
4 Cr. DEMAND

ACR 626 Evidence Based Medicine
Published clinical experience. Practice and principles of evidence-based medicine relating to common chronic diseases and conditions. The relationship between published experience and the role of medical devices and combination products.
3 Cr. DEMAND

ACR 628 Regulatory Compliance and Research Ethics
Regulations associated with research ethics, regulatory and global standards for research conduct, and how to problem solve real-world cases. Regulations and standards for clinical trials. Communication and ethical considerations in negative product-performance situations.
3 Cr. DEMAND

ACR 630 Clinical Study Design and Planning
Protocol development, study design selection, budgeting, investigational plan requirements, and site selection. Legal and regulatory aspects.
3 Cr. DEMAND

ACR 632 Clinical Study Operations and Execution
Roles and responsibilities of practitioners. Study tracking tools and strategies for clinical project management.
Prereq.: ACR 630 3 Cr. DEMAND

ACR 634 Clinical Risk Management and Safety
Risk analysis, mitigation, assurance, and control in clinical trials. Clinical quality control. Corrective and Preventive Actions (CAPA), adverse events, protocol deviations, safety issues and advisory and safety committees.
3 Cr. DEMAND

ACR 636 Communications and Reporting for Clinical Trials
Regulatory reporting requirements related to the clinical research of medical products. Communication skills and required documentation.
3 Cr. DEMAND

ACR 640 Clinical Research Leadership
Roles and responsibilities in leadership. Clinical leadership, integration of cross-functional objectives, and critical thinking.
3 Cr. DEMAND

ACR 641 Communication for MedTech Professionals
Medical/scientific writing, persuasive writing, professional presentations, self-awareness, giving and receiving feedback.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Use medical/scientific writing techniques to concisely convey complex information to medical/scientific and regulatory audiences.
2. Describe AMA standard writing format and appropriate citations of references and demonstrate use in technical writing.
3. Demonstrate use of elements of successful professional presentations.
4. Describe techniques and approaches to self-awareness and self-management apply them in professional settings.
5. Identify international-, federal-, state-, and local-level resources for the clinical research professional.

ACR 644 Internship in Applied Clinical Research
Professional experience in clinical research.
Prereq.: ACR 620, ACR 622, ACR 641, ACR 624, ACR626, ACR628 Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Students will analyze and synthesize responsibilities of the clinical research organization in the host company.
2. Students will apply the process of planning and implementing regulatory strategies.
3. Students will document planning and implementation appropriately.
4. Students will write and present at a professional level.

ACR 696 Clinical Culminating Experience
Research paper integrating information acquired in at least three courses, comprehensive written examination, and oral examination. Students may conduct a research project with administrative approval. A total of 2 credits are required. Project may be completed over 1 or 2 semesters.
Coreq.: 1-2 Cr. Fall | Spring | Summer

Applied Behavior Analysis (ABA)

ABA 530 Seminar
Selected topic in psychology. May be repeated to a maximum of 12 credits.
3 Cr. Fall | Spring | Summer

ABA 532 Instrumentation: Laboratory Equipment
Psychological laboratory equipment including electromechanical and solid-state control, interface, environmental, and data-recording devices.
2 Cr. DEMAND

ABA 534 Applied Behavior Analysis II
Advanced applied behavior analysis techniques. Design, assessment, and evaluation of behavior change procedures. Current issues.
Prereq.: CPSY 330, CPSY 433-533 3 Cr. Fall | Spring

ABA 541 Experimental Analysis of Behavior
Basic behavioral processes, principles, and theories describing behavior patterns. Quantitative analysis of behavior, experimental preparations, and basic behavior measurement.
3 Cr. Fall

ABA 597 Practicum in Behavior Analysis
Practicum experience in behavior analysis. Students will attend agency orientation and gain practical experience in defining and observing behaviors, and the development and implementation of behavioral programs.
Coreq.: CPSY 533 3 Cr. Fall | Spring | Summer

ABA 627 Behavior/Social Skills Assessment and Intervention for Students with ASD
Behavior analytic assessment and instructional planning for individuals with Autism Spectrum

Disorder. Functional assessment and behavioral treatment planning for challenging behaviors. Grade of B or higher required to earn the Autism Certificate.
Prereq.: SPED 623 and CSD 624; SPED 505 3 Cr. Summer

ABA 630 Advanced Applied Behavior Analysis
Definition and advanced characteristics of applied behavior analysis. Behavioral principles, processes, and concepts of behavior change procedures and systems support.
3 Cr. Fall

ABA 633 Behavioral Applications I
Ethics, history, theories, and principles of behavior analysis and therapy. Current techniques, applications to specific populations, behavioral research, and future directions.
3 Cr. Fall

ABA 634 Behavioral Assessment
Naturalistic observation, self-report inventories, behavioral checklists, other forms of assessment in mental health, schools, business and industry, and health.
3 Cr. Fall

ABA 635 Behavioral Applications II
Behavior analysis and applications for multiple populations, behaviors, and settings. Functional assessment, research, ethical issues, design, implementation, and evaluation of behavioral programs.
Prereq.: ABA 633 3 Cr. Spring

ABA 636 Ethics in Psychology and Behavior Analysis
Responsible conduct during behavioral assessment, behavioral treatment, teaching, supervision, research, and other professional behaviors. Behavior Analyst Certification Board conduct guidelines, APA ethics codes, and Minnesota Board of Psychology standards.
3 Cr. Spring

ABA 637 Functional Analysis
Components of a "functional behavior assessment (FBA)" including indirect assessment, descriptive analyse, and functional analysis will be examined.
3 Cr. Spring | Summer

ABA 638 Behavioral Foundations of Autism Treatment
Behavior analytic theory and systems approach in understanding and treating autism. Behavioral treatment models and research. Behavioral consultation models.
3 Cr. DEMAND

ABA 639 Comprehensive Exam Preparation
Students will review course material and complete practice exercises to assist in preparing for the Comprehensive Examination.
3 Cr. Spring

ABA 640 Comprehensive Exam
Capstone requirement for students completing M.S. in Applied Behavior Analysis, Plan B.
1 Cr. Summer

ABA 641 Single-case Design
(Same as CEEP 641) Single-case experimental designs and data analysis procedures for evaluating behavioral change strategies in behavioral intervention programs.
3 Cr. Fall

ABA 643 Social Bases of Behavior
Psychological approaches to the development and modification of social behavior and phenomena.
3 Cr. Fall | Spring | Summer

ABA 663 Applied Theories of Learning
Applications to teaching, clinical intervention, and applied behavior analysis.
3 Cr. Fall

ABA 693 Intensive Practicum in Behavior Analysis
Intensive Practicum in Behavior Analysis meets the experience and supervision requirements of the Behavior Analysis Certification Board. May be repeated; 9 credits required for graduation.
Coreq.: 3-9 Cr. Fall | Spring | Summer

ABA 697 Supervised Internship in Behavior Analysis
Supervised experience in a community agency.
Coreq.: 3-9 Cr. Fall | Spring | Summer

ABA 699 Thesis
Thesis.
Coreq.: 1-6 Cr. DEMAND

Art (ART)

Astronomy (ASTR)

ASTR 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ASTR 505 Introduction to Planetarium Operation
Use of the planetarium projector to show important sky motions, appearance of the sky from different places on the Earth, seasonal passage and bright constellations. Student will create and perform a planetarium program.
Prereq.: ASTR 311 or equivalent or consent 1 Cr. DEMAND

ASTR 521 Selected Topics in Astronomy
Lectures, readings and/or discussion on selected topics in astronomy, astrophysics, or planetary science. May be repeated to maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

ASTR 585 Workshop: Observational Astronomy
Designs of small telescopes and their operation, techniques for locating and observing astronomical objects with a small telescope.
Prereq.: ASTR 205 or consent 1 Cr. Summer

ASTR 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ASTR 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr.

ASTR 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ASTR 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

ASTR 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ASTR 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr.

ASTR 699 Master's Thesis
Master's Thesis.
Coreq.: 1-1 Cr. Fall | Spring | Summer

ASTR 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ASTR 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ASTR 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ASTR 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ASTR 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

ASTR 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

Atmospheric and Hydrologic Sciences (AHS)

AHS 520 Seminar
Lectures, readings, discussions on selected topics. May be repeated.
Coreq.: 1-3 Cr. Fall | Spring

AHS 523 Sedimentation and Stratigraphy
Sedimentary processes and environments, formation of sedimentary rocks, stratigraphy, and basin analysis. Use of stratigraphic principles to interpret earth history.
Prereq.: AHS 220 3 Cr. Odd Fall

AHS 524 Structural Geology and Tectonics
Brittle and ductile deformation. Stress and strain theory. Structural interpretation problems. Development and significance of plate tectonics as a unifying theory for geology.
Prereq.: AHS 220, AHS 305 4 Cr. DEMAND

AHS 525 Petrography
Principles of optical mineralogy. Thin-section identification of minerals and rocks. Petrogenesis of igneous, sedimentary, and metamorphic rocks.
Prereq.: AHS 325 3 Cr. DEMAND

Biological Sciences (BIOL)

BIOL 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

BIOL 514 Paleobiology
Ancient life from the Precambrian microorganism through Cenozoic macrofossils. Trace fossils, ancient animals/plants, extinction.
3 Cr. DEMAND

BIOL 518 Wetland Plant Communities
The structure, characteristics, indicator plants, wildlife uses, management, and restoration of wetland and aquatic plant communities.
Prereq.: BIOL 151, BIOL 152 2 Cr. Fall

BIOL 520 Plant Taxonomy
Principles and practice of plant taxonomy including modern technological approaches.
Prereq.: BIOL 306 4 Cr. Spring

BIOL 522 Terrestrial and Aquatic Plant Identification
Field identification and ecological aspects of local terrestrial, wetland, and aquatic vascular plants.
Prereq.: BIOL 306 4 Cr. Summer

BIOL 530 Phycology
The collection, identification, culture, and study of freshwater algae from diverse habitats; primary production, community interactions, life cycles, and lake phytoplankton and stream phytobenthos assessment.
Prereq.: BIOL 306, BIOL 312 4 Cr. DEMAND

BIOL 534 Freshwater Invertebrate Zoology
Natural history, collection, and classification of local species of freshwater invertebrates, exclusive of planktonic forms and Protozoa.
Prereq.: BIOL 308, BIOL 312 4 Cr. DEMAND

BIOL 536 Water Quality
Water quality monitoring, sampling strategies, and data analysis. Biomonitoring, toxicity, eutrophication, acid deposition, and groundwater quality.
4 Cr. DEMAND

BIOL 541 Comparative Animal Behavior
Behavior of animals in their natural environments. Comparative analysis across a range of species and topics.
3 Cr. DEMAND

BIOL 542 Wildlife Populations
Mathematical modeling of population growth, population sampling techniques, and survival/reproduction. Case studies involve theoretical and empirical investigation of single populations, metapopulations, and sources and sinks.
4 Cr. DEMAND

BIOL 549 Field Studies in Biology (Topical)
Field trips to study the flora, fauna, and ecology of native habitats such as Isle Royal and the Florida Keys. Arranged instructional sessions may be required before or after the trip. Travel expenses required. Permission of instructor. May be repeated, with approval of adviser to a max. of 9 credits.
Coreq.: 1-3 Cr. DEMAND

BIOL 553 Seminar in Biology (Topical)
Presentations and discussions by students under guidance of a faculty member. May be repeated to a max. of 4 credits.
Coreq.: 1-3 Cr. Fall | Spring

BIOL 555 Practicum (Topical)
Supervised experience in selected areas such as laboratory management, greenhouse management, animal room management, aquarium management, Museum/herbarium curator, undergraduate learning assistants. May be repeated to a maximum of 3

credits. Departmental approval required for enrollment.
Coreq.: 0-3 Cr. Fall | Spring | Summer

BIOL 556 Biological Evolution
History, evidence, and processes of biological evolution (microevolution, speciation, and macroevolution). Theories on the origin of life.
3 Cr. Fall | Spring

BIOL 557 History and Philosophy of Biology
Origins of science and history of biological discoveries. The development of modern biology. Philosophical bases for the biological sciences.
3 Cr. Spring

BIOL 560 General Parasitology
Parasite ecology and classification. The relationship of these organisms to diseases of humans and animals.
Prereq.: BIOL 151, BIOL 152 4 Cr. Fall

BIOL 561 Conservation and Management of Animals
Biology, ecology, population structures, sampling methods, management techniques, life histories and demographic analysis, ecosystems, and conservation of animals.
Coreq.: Cr. Fall

Student Learning Outcomes
1. Describe the ecology and basic biology of the major groups of animals.
2. Assess the major groups of commercially important animals found worldwide, invasive species, and common native and invasive animals of Minnesota.
3. Specify the importance of biodiversity and mechanisms to conserve biodiversity 4. Assess the causes and consequences of threats to biodiversity
5. Determine conservation strategies to protect animal biodiversity in terrestrial and aquatic habitats.
6. Summarize the causes of variation in population genetics and how population genetics informs our understanding of the history of animal populations through time.
7. Construct population demographic assessments of animals, including sampling techniques and methods for estimating population size.
8. Produce management strategies for sustaining populations of threatened, endangered, and commercially important terrestrial and aquatic animals.
9. Develop a management plan for an invasive animal species.
10. Evaluate the data and conclusions drawn from primary literature, particularly in relation to the conservation and management of animals.

BIOL 562 Medical Microbiology
Taxonomy, morphology, culture biochemical activities of pathogenic microorganisms and their pathogenic mechanisms and the corresponding host response.
Prereq.: BIOL 362 4 Cr. Spring

BIOL 564 Hematology
Blood cell formation and function, morphology and function. Etiology and lab diagnosis of common hematologic diseases. Mechanisms of hemostasis. Clinical procedures.
Prereq.: BIOL 151 3 Cr. Fall

BIOL 565 Principles of Phylogenetics
Taxonomy, Linnaean system & codes of nomenclature, homology and character analysis, history of systematics, systematic principles, optimality criteria, divergence-time estimation, character evolution, biogeography, macroevolution.
Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Summarize the history of taxonomic classifications and the rules of nomenclature
2. Demonstrate phylogenetic approaches to classification 3. Apply the principle of homology to estimating relationships among organisms
4. Examine the history of systematics and fundamental principles of phylogenetic theory
5. Assess the differences among optimality criteria (e.g., Parsimony, Likelihood, Bayesian) for identifying optimal hypotheses of evolutionary relationships.
6. Demonstrate methods of phylogenetic reconstruction and divergence-time estimation.
7. Apply principles of biogeography and applications of phylogenetics to studying historical distributions of organisms.
8. Apply methods and applications of phylogenetics, including character evolution.
9. Evaluate the data and conclusions drawn from primary literature, particularly in relation to taxonomy and systematics.

BIOL 566 Microscopy and Image Analysis

Principles of light microscopy, image acquisition, and analysis including computer measurement and enhancement of images.
Prereq.: BIOL 151 2 Cr. Fall | Spring

BIOL 572 Virology
Morphology, virus-host relationships, diseases, prions and viroids.
Prereq.: BIOL 362 3 Cr. Spring

BIOL 574 Neurobiology
Molecular, cellular and developmental aspects of the nervous system. Sensory, motor, and central systems. Mechanisms of neuropathology.
Prereq.: BIOL 360 3 Cr. DEMAND

BIOL 575 Systematic Bioinformatics
Biological collections, collection stewardship, biological collections databases, networks, cybertaxonomy, taxonomic concepts, ontology, specimen digitization, georeferenced specimens, predictive ecogeographic modeling, genomic databases, genomic partitioning strategies, models of molecular evolution, phylogenomics.
Prereq.: BIOL 456 Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Summarize the history of biological collections and describe their importance to ecological and evolutionary biology 2. Demonstrate good collection stewardship 3. Analyze the role of cybertaxonomy in modern taxonomy 4. Evaluate methods of specimen digitization and applications of this data for taxonomic, phylogenetic, and evolutionary studies
5. Analyze the importance of georeferencing biological collections and how to access databases with georeferenced information 6. Apply ecogeographic predictive modeling to ecological and evolutionary studies.
7. Examine genomic databases associated with biological collections 8. Summarize genomic partitioning strategies, models of molecular evolution, and fundamentals of phylogenomics.
9. Apply methods and applications of phylogenomic studies.
10. Evaluate the data and conclusions drawn from primary literature, particularly in relation to cybertaxonomy, phylogenomics, and bioinformatics.

BIOL 576 Developmental Biology
The development of multi-cellular organisms at the molecular, cellular, and organismal levels.
Prereq.: BIOL 360 4 Cr. Spring

BIOL 577 Advanced Anatomy: Human Dissection
Detailed regional dissection. Functional and clinical aspects of dissections. Technique and preparation of prosections for introductory courses. By permission only.
3 Cr. Summer

BIOL 578 Human Physiology
Physiological processes at the molecular, cellular, and organismal levels.
Prereq.: BIOL 360, BIOL 366 4 Cr. Fall

BIOL 580 Human Endocrinology and Reproduction
Principles of endocrinology at the molecular, cellular, and organismal level and how endocrine factors regulate the reproductive physiology and behavior of humans.
Prereq.: BIOL 360 3 Cr. Spring

BIOL 582 Advanced Protein Techniques
The theory and application of instrumentation in monitoring, quantifying, and isolating proteins. An individual protein purification project will be required.
Prereq.: BIOL 264, BIOL 360, CHEM 271, CHEM 311 4 Cr. Fall | Spring

BIOL 583 Histological Techniques
Theoretical and applied aspects of processing, staining, and evaluating tissues through microscopic study.
Prereq.: BIOL 364 or permission of instructor. 3 Cr. Summer

Student Learning Outcomes

1. Evaluate the theoretical basis of tissue fixation and demonstrate proficiency using tissues provided.
2. Recommend techniques for sectioning of tissues and demonstrate proficiency of ranking paraffin embedded tissue.
3. Compare the theoretical basis of staining of tissues and demonstrate proficiency in evaluating the quality of stained sections.
4. Distinguish methods for evaluating normal and abnormal tissue and use scoring rubrics to evaluate tissue types and functional state.
5. Excise, dehydrate, embedd, section and stain histological sections for medical and research evaluation.
6. Design trouble-shooting procedures for fixation, staining, and sectioning of tissues.

BIOL 584 Advanced DNA Techniques
Theory, techniques, and instrumentation of genetic engineering and gene analysis.
Prereq.: BIOL 362, CHEM 480 4 Cr. Spring

BIOL 586 Immunology
Humoral and cell-mediated immune responses. Lymphoid tissues, initiation, and regulation of responses, mechanisms of immunopathologies.
Prereq.: BIOL 360, BIOL 362 4 Cr. Fall | Spring

BIOL 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

BIOL 590 Selected Topics in Biology
Topics announced in schedule of classes. May be repeated to a maximum of 12 credtis.
Coreq.: 1-4 Cr. DEMAND

Student Learning Outcomes
1. Analyze a specific problem in biology using the scientific method.
2. Describe and apply key theories in biology.
3. Communicate experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

BIOL 591 Invasive Plant Species Management
Characteristics of invasive species, vectors of introduction and spread, ecological and economic consequences, regional invasive species of concern, management, control and eradication programs, invasions and global climate change
Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Identify genetic and physiological characteristics of invasive species 2. Analyze vectors of introduction and spread of invasive species 3. Assess ecological and economic consequences of invasions 4. Identify regional species of concern 5. Evaluate management, control, and eradication techniques 6. Analyze role of invasives in the context of global climate change

BIOL 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

BIOL 601 Readings in Biology (Topical)
May be repeated to a max. of 8 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

BIOL 602 Modern Biological Concepts
Modern concepts in physiology, genetics, and ecology. Not applicable to biology M.A. program.
3 Cr. DEMAND

BIOL 603 Internship in Biology
Experience on location in industry or government agency. Arrangements must be made before registration.
Coreq.: 1-4 Cr. Fall | Spring | Summer

BIOL 610 Special Topics in Biology
A lecture or a lecture/laboratory course in a special area of the biological sciences. Prereq. may be required. May be repeated to a max. of 8 credits.
Coreq.: 1-3 Cr. DEMAND

BIOL 628 Research Design
Experimental design for graduate students in biology and related fields. Scientific methodology and statistical applications.
2 Cr. Fall

BIOL 630 Seminar in Biology (Topical)
Oral presentations by student under the guidance of a faculty member. May be repeated to a max. of 4 credits.
Coreq.: 1-2 Cr. Fall | Spring

BIOL 632 Current Trends in Ecology
Research findings and trends in selected topics in Ecology, from landscape and restoration ecology to ecological physiology. Topics will be selected by the instructor(s) and revised as new findings emerge.
Coreq.: BIOL 633 3 Cr. Fall

BIOL 633 Advanced Ecological Methods

Observation and experimental techniques to address ecological questions as related to material covered in BIOL 632.
Coreq.: BIOL 632 2 Cr. Fall

BIOL 634 Current Trends in Population Biology
Research findings and trends in selected topics in Population Biology from Predatory-Prey dynamics to plant population distributions at native and disturbed sites. Topics will be selected by the instructor(s) and be revised as new findings emerge.
Coreq.: BIOL 635 3 Cr. Fall | Spring

BIOL 635 Advanced Techniques in Population Biology
Sampling and observation techniques to address population biology questions as related to material covered in BIOL 634.
Coreq.: BIOL 634 2 Cr. Fall | Spring

BIOL 636 Current Trends in Limnology
Research findings and trends in selected topics in Limnology from pollution impact and biomonitoring to stream ecology. Topics will be selected by the instructor(s) and be revised as new findings emerge.
Coreq.: BIOL 637 3 Cr. Fall

BIOL 637 Advanced Limnological Techniques
Sampling and observation techniques to address limnological questions as related to material covered in BIOL 636.
Coreq.: BIOL 636 2 Cr. Fall

BIOL 650 Research in Biology
May be repeated to a max. of 6 credits. May be applied toward a masters degree program.
Coreq.: 1-6 Cr. Fall | Spring | Summer

BIOL 652 Data Analysis & Manuscript/Thesis Preparation
Preparing a manuscript and/or thesis.
2 Cr. Spring

BIOL 666 Cell and Molecular Biology Laboratory I
Research in Cell and Molecular Biology integrating modern laboratory techniques.
3 Cr. DEMAND

BIOL 668 Advanced Topics in Microbiology
Topic selected by instructor(s).
2 Cr. DEMAND

BIOL 670 Advanced Topics in Genetics
Topics in genetics selected by the instructor(s).
2 Cr. DEMAND

BIOL 672 Advanced Topics in Physiology
Topics in physiology selected by the instructor(s).
2 Cr. DEMAND

BIOL 674 Advanced Topics in Cell and Developmental Biology
Topics selected by instructor(s).
2 Cr. DEMAND

BIOL 678 Graduate Student Practicum
Preparing materials for biology courses. Designing laboratory exercises. Teaching methods, formative and summative assessment techniques.
1 Cr. Fall | Spring

BIOL 680 Cell and Molecular Biology Laboratory II
Advanced research in cell and molecular biology integrating modern laboratory techniques.
3 Cr. DEMAND

BIOL 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

BIOL 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

BIOL 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

BIOL 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

BIOL 699 Master's Thesis

Coreq.: 1-6 Cr. Fall | Spring | Summer

BIOL 790 Selected Topics

May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BIOL 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BIOL 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BIOL 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BIOL 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BIOL 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

Business Law (BLAW)

BLAW 533 Marketing and the Law
Legal regulatory, and ethical aspects of marketing activities including product development, promotion pricing and distribution.
3 Cr. Fall | Spring

BLAW 534 Real Estate Law
Principles of law affecting ownership of real estate interests, the transfer of real property interests, and land use and development.
Prereq.: FIRE 378 3 Cr. Fall

BLAW 535 Technology and the Law
The legal, regulatory, and ethical aspects of managing technology and intellectual property including patents, trademarks, trade secrets, and copyrights.
3 Cr. DEMAND

BLAW 536 Commerical and Financial Law
Legal principles of commercial and financial transactions, including contracts, sales, commercial paper, property, secured transactions, creditor rights, bankruptcy and securities regulation.
3 Cr. Fall | Spring | Summer

BLAW 537 International Business Law
The legal, regulatory, and ethical aspects of international trade including cultural, political, and linguistic influence on the international legal environment.
3 Cr. DEMAND

BLAW 538 Employment Law
The legal, regulatory, and ethical aspects of human resources management including employment discrimination, harassment, workers compensation, and terms and conditions of employment.
3 Cr. DEMAND

BLAW 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

BLAW 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BLAW 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BLAW 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BLAW 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BLAW 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

BLAW 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

Chemistry and Biochemistry (CHEM)

CHEM 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-4 Cr. Fall | Spring | Summer

CHEM 520 Physical Chemistry 1

Application of fundamental laws and theoretical principles to real and ideal gases, thermodynamics, systems of variable composition, chemical equilibrium, phase equilibrium, the phase rule, solutions, colligative properties, condensed phase equilibria, and nonideal systems.
Prereq.: CHEM 350, MATH 212 or MATH 222, PHYS 232 or PHYS 235 4 Cr. Fall

CHEM 521 Physical Chemistry 2
Application of fundamental laws and theoretical principles to equilibria in electrochemical cells, surface phenomena, the structure of matter, quantum mechanics, atomic and molecular spectroscopy, bonding, solids, electrical conduction, and kinetics.
Prereq.: CHEM 420 - CHEM 520 4 Cr. Spring

CHEM 522 Physical Chemistry Lab 1
Laboratory to complement Physical Chemistry 1 (420-520). A quantitative measurement of properties and phenomena of chemical interest and their interpretation by use of chemical principles.
Prereq.: CHEM 420 - CHEM 520 1 Cr. Fall

CHEM 523 Physical Chemistry Lab 2
Laboratory to complement Physical Chemistry 2 (421-521). A quantitative measurement of properties and phenomena of chemical interest and their interpretation by use of chemical principles.
Prereq.: CHEM 421 - CHEM 521 1 Cr. Spring

CHEM 530 Inorganic Chemistry 1
Concepts or inorganic chemistry; electronic structures of atoms; crystal structure; chemical bonding including molecular orbital theory; nomenclature, bonding and structure of coordination compounds.
Prereq.: CHEM 420 - CHEM 520 4 Cr. Fall

CHEM 531 Inorganic Chemistry 2
Application of the concepts or inorganic chemistry to chemical elements and compounds. Coordination chemistry including ligand field theory.
Prereq.: CHEM 430 - CHEM 530 2 Cr. Spring

CHEM 540 Environmental Analytical Chemistry (2,3)
Theoretical and practical aspects of chemical analysis of soils, water, and air samples. Emphasis on sample preparation.
Prereq.: CHEM 350 3 Cr. DEMAND

CHEM 550 Instrumental Analysis (3,3)
Major instrumental methods of chemical analysis including spectroscopic, electrometric, and chromatographic methods.
Prereq.: CHEM 350, CHEM 420 - CHEM 520 or CHEM 482, CHEM 582 4 Cr. Spring

CHEM 552 Nuclear Chemistry and Radiochemistry
Nuclear stability and structure; decay systematics and energetics; interactions of radiation with matter; nuclear energy; detection, measurement and characterization of radiation; application to chemical and biological problems.
Prereq.: CHEM 211 3 Cr. Even Spring

CHEM 553 Organic Mechanisms and Synthesis
A course in advanced organic chemistry involving key mechanisms and reactions; strategies and tactics of complex organic syntheses.
Prereq.: CHEM 311 3 Cr. DEMAND

CHEM 560 Selected Topics in Chemistry
Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 561 Selected Topics in Chemistry
Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 562 Selected Topics in Chemistry
Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 563 Selected Topics in Chemistry
Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 564 Selected Topics in Chemistry
Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 565 Selected Topics in Chemistry

Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 566 Selected Topics in Chemistry
Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 567 Selected Topics in Chemistry
Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 568 Selected Topics Chem
Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 569 Selected Topics in Chemistry
Non-sequence courses designed for intensive study of a special topic. Topic will be announced in the class schedule. Consent of instructor.
Coreq.: 1-4 Cr. DEMAND

CHEM 580 Biochemistry 1
The chemical structure and function of most fundamental biomolecules; carbohydrates, lipids and proteins. Fundamentals of enzyme function and metabolism.
Prereq.: CHEM 311 4 Cr. Fall

CHEM 581 Biochemistry 2
Major metabolic pathways; biochemistry of nucleic acids; and biophysical techniques.
Prereq.: CHEM 480, CHEM 580 4 Cr. Spring

CHEM 582 Biophysical Chemistry
Biomolecular structure, thermodynamics and kinetics and their study through spectroscopic techniques.
Prereq.: CHEM 480, MATH 211, MATH 212 or MATH 222, PHYS 232 or PHYS 235 4 Cr. Spring

CHEM 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CHEM 590 Seminar
Lectures, readings, discussion on selected topics. The successful conclusion of the course involves a formal presentation by the student in the form of a seminar to the department. May be repeated to a max. of 4 credits.
1 Cr. Fall | Spring

CHEM 591 Senior Thesis
Conclusion of the capstone experience involving a formal presentation of a research or library project in the form of a seminar to the department, and a written paper following departmental guidelines. Attendance at departmental seminars is required.
Prereq.: CHEM 391 2 Cr. Spring

CHEM 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CHEM 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CHEM 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CHEM 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CHEM 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

CHEM 790 Selected Topics

May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CHEM 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CHEM 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CHEM 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CHEM 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CHEM 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

Child & Family Studies (CFS)

CFS 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CFS 504 Birth Order in the Family
Implications of birth order on the family; implications of the family constellation. Instructor will provide more depth on each topic area.
1 Cr. DEMAND

CFS 505 Selected Topics in Child and Family Studies
Current issues, child/family programs, teaching methods.
Coreq.: 1-4 Cr. DEMAND

CFS 506 Early Literacy in Inclusionary Settings
Language and literacy development (including English as a second language) in the preschool years. Creating and evaluating developmentally appropriate literacy rich environments for children with diverse needs. 2.75 GPA requirement.
3 Cr. DEMAND

CFS 513 Guidance of Young Children
Guidance approach for young children. Managing the classroom and daily routines. Using effective communication. Positive alternate solutions to discipline young children. Crisis management techniques including working with special education.
3 Cr. Fall | Spring

CFS 515 Foundations of Parent/Family Education
Introduction to the history, philosophy and program models for parent/family education with emphasis on Early Childhood Family Education in Minnesota. Diverse family systems and needs for parent education. Professional and ethical behavioral outlined.
3 Cr. Fall

CFS 521 Development of Young Children
Typical and atypical development of children, ages 3 through 10. Application of theories of development, observation skills, and understanding of the influence of early experiences for early childhood practices.
3 Cr. DEMAND

CFS 522 Families: Theories and Strategies
In-depth analysis of diverse family systems. Theories of family development. Developing communication skills and partnership strategies. Values and attitudes and their impact on working with families. Family stress, coping and resources. Families with challenges. Levels of parent involvement. Analyzing current issues and their impact on families.
3 Cr. DEMAND

CFS 524 Administration of Early Education
This course is designed to give students skills necessary to direct and operate programs in early childhood education. Current legislation is studied.
2 Cr. DEMAND

CFS 560 Early Education Student Teaching
Supervised student teaching in early childhood settings.
Coreq.: 3-10 Cr. Fall | Spring

CFS 561 Pre-professional Seminar
For student teachers. Professional ethics and standards, development of a personal education philosophy, professional goals and compentencies, contemporary issues.
Coreq.: CFS 460-560 1 Cr. DEMAND

CFS 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for

continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CFS 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CFS 605 Issues and Topics in Early Childhood and Family Studies
A variable content course design to address specialized areas of study related to early childhood education, child development, parent education, parenting practices, legislation, child advocacy or other topics which are of current concern to faculty and/or students.
Coreq.: 1-4 Cr. DEMAND

CFS 608 Developmental Screening and Assessment
Philosophies, procedures and appropriate practices in the screening and assessment of infants, toddlers and preschoolers. Hands-on experience in conducting assessments of young children for referral/eligibility for special education. Interpretation of results for intervention.
3 Cr. Fall

CFS 611 Foundation of Early Childhood Education/Early Childhood Special Education
Overview of early childhood, early childhood special education including history, philosophies, legal requirements. Professional viewpoints from national organizations. Models of early education and early childhood special education.
3 Cr. DEMAND

CFS 621 Research Methods: Child/Family
A seminar focusing on research and current issues for students working on MS projects. An overview of the research process and strategies for completing thesis and starred papers.
3 Cr. DEMAND

CFS 622 Advanced Family Studies/Student Research
Seminar focusing on family studies and research and current issues for students working on MN projects. An overview of the research process and strategies for completing a thesis and starred papers.
3 Cr. DEMAND

CFS 623 Analysis of Early Education
Evaluation, planning, designing learning environment, equipment/facilities, teaching roles, socialization of children in early childhood education.
3 Cr. DEMAND

CFS 625 Methods of Parent and Family Education
Overview of various methods and curricula used in the field of parent and family education. Review and evaluation of existing programs and curricula. Development and adoption of parent and family education curricula for specific populations.
Coreq.: CFS 665 2 Cr.

CFS 626 Working with Families in Special Circumstances
Consideration for working with families experiencing stress due to poverty, racism, limited literacy, disabilities and family violence. Family strengths approach and role of parent/family education in addressing difficult family circumstances.
2 Cr. Summer

CFS 627 Home Visiting
Home visiting is explored as a strategy for offering educational services to parents and young children. Different goals, communities and cultural contexts. Specific skills needed to implement this strategy are addressed.
2 Cr. DEMAND

CFS 631 Development of Infants and Toddlers
Study of development prenatally to 2 years, typical and atypical. Analysis of the impact of family, community, culture and society upon development. Examination of ethical issues associated with this period of development. Can be repeated.
3 Cr. Spring

CFS 632 Analysis of Families with Children with Disabilities
Analysis of diverse family systems, communication, teaming, stress and coping. Critical analysis of family needs, concerns and priorities.
3 Cr.

CFS 633 Methods: Young Children With Disabilities
Develop curriculum based on assessment data, children's goals, objectives and best practices. Understand inclusion and strategies for implementation. Designing and evaluating environments. Utilizing activity based instruction, adaptation strategies and curricula free from bias. Using a language based curricula with rich literacy activities. Incorporating multisensory activities, music, movement, art, technology and other content areas throughout the curriculum for children 3-5 years.
3 Cr. Fall

CFS 635 Parenthood and Adult Development
Stages of parenthood and interface with adult development. Application of adult learning theories to parent education settings.
2 Cr.

CFS 636 Fathers in Parent Education
Exploration of the changing roles of fatherhood. Gender as a factor in relation to goals of parent education, styles of discipline, communications styles, and parent roles. Adapting programs to meet the needs of fathers in various family settings.
2 Cr. DEMAND

CFS 643 Methods: Infants and Toddlers with Disabilities
Teaching strategies for infants and toddlers with disabilities/delays including appropriate handling, positioning and feeding related to disabilities and/or special health concerns. Linking assessment information to the development of appropriate goals/objectives and interventions. Working as a member of an interdisciplinary team/development of IFSPs/Home visiting.
3 Cr. Fall

CFS 645 Working with Parents in Groups
In-depth analysis of group dynamics and effective group skills in parent education. Theories of group process approaches to leadership. Communication within groups.
2 Cr.

CFS 646 Advanced Group Skills in Parent Eductaion
Advanced skills for working with parents at different levels of involvement. Adaptation of communication and consultation parent education skills for use with individual parents and groups in parent education.
Prereq.: CFS 645 2 Cr. Summer

CFS 653 Early Childhood Methods: Reading, Math, Science (5-8 years)
Understand how reading, writing, math and science are learned and taught. Methods to adapt and modify these curricular areas for students with disabilities in inclusionary settings. Teaching functional use of these four areas and integrating them into play and thematic units.
3 Cr. DEMAND

CFS 654 Parent Education with Parents of 5-10 year olds
Methods and resources for designing parent education for parents of 5-10 year olds. Emphasis on ways to guide development, support a child's learning and reinforce and family's values system.
2 Cr. Summer

CFS 655 Parent Education with Parents of 10-15 year olds
Methods of working with parents of 10-15 year olds. An emphasis on understanding development, communication techniques and monitoring activities.
2 Cr. DEMAND

CFS 661 Practicum in Development of Young Children
Field experience involving aspects of observation, assessment, participation with and planning for infants and toddlers. Can be repeated.
1 Cr. DEMAND

CFS 665 Parent Education Practicum
Field experiences observing parent education settings. Analysis and development of parent education methods and resources.
Coreq.: CFS 625 1 Cr. DEMAND

CFS 666 Parent Education Group Practicum
Field experiences observing parent groups in a variety of parent and family education settings. Analysis of group process and situations.
Coreq.: CFS 645 1 Cr. Spring

CFS 674 Field Experiences or Research in Admini and Faciliation of Early Childhood
Opportunity to participate in a variety of administrative roles in early childhood programs. A practicum for students which will provide an

experience as an administrator or coordinator of early childhood programs.
Coreq.: 1-4 Cr. DEMAND

CFS 675 Parent Education Student Teaching
Supervised student teaching in parent/family education programs with parent groups. Students also participate in a concurrent seminar with peers.
3 Cr. Fall | Spring

CFS 680 ECSE Infant Student Teaching
Supervised student teaching in ECSE infant/toddler programs. Student teaching seminar.
Coreq.: 2-4 Cr. Fall | Spring

CFS 681 ECSE Preschool Student Teaching
Supervised student teaching in ECSE preschool programs. Student teaching seminars.
Coreq.: 2-4 Cr. Fall | Spring

CFS 682 ECSE K-Primary Student Teaching
Supervised student teaching in ECSE K-Primary inclusionary programs. Student teaching seminars.
Coreq.: 2-4 Cr. DEMAND

CFS 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

CFS 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. DEMAND

Communication Sciences and Disorders (CSD)

CSD 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSD 515 Topics in Speech-Language Pathology and Audiology
Specialized topics related to speech, language, and hearing. Areas of current interest to faculty and/or students. A maximum of 6 credits can be applied to a master's degree program. Repeatable for students who have completed their Master's degree.
Coreq.: 1-2 Cr. Summer | DEMAND

CSD 526 Neurological Bases of Speech and Language
Neuroanatomy and neurophysiology of speech and language. Speech, language, cognitive, and swallowing disorders associated with different types of brain damage.
Prereq.: CSD 322 3 Cr. Fall

CSD 527 Language and Language Disorders in Adults
Typical language and cognition in adults, aging effects and the nature of language and cognitive disorders encountered in the aged population.
3 Cr. Spring

Student Learning Outcomes

1. Describe the typical language processing in adults based on neuropsychological models of cognitive-linguistic processes of language.
2. Analyze the effects of normal aging on cognitive and linguistic functions in communication.
3. Describe the etiologies (causes) of various communication disorders in the aged population.
4. Identify and discuss the characteristics of the typical communication disorders seen in the elderly.
5. Integrate the effects of typical and atypical language behaviors in communication functions of the elderly.

CSD 531 Voice Disorders
Types and causes of voice disorders, principles and procedures underlying the diagnosis and treatment of voice disorders.
Prereq.: CSD 322 3 Cr. Fall

CSD 532 Fluency Disorders
The nature and causes of disorders of fluency; approaches for assessing and treating fluency disorders.
3 Cr. Spring

CSD 534 Articulation Disorders
Development of articulation in children; factors that enhance or impede development; diagnostic procedures used in articulation assessment; treatment strategies for disorders of articulation.
Prereq.: CSD 220 3 Cr. Spring

CSD 540 Communication Disorders of the Aged
Management of older persons with speech, language, and hearing problems.
2 Cr. Fall

CSD 541 Hearing Measurement
Causes and effects of hearing disorders, classification of hearing loss, and medical management procedures. Basic audiometric procedures. Laboratory participation and clinical competency demonstration required.
Prereq.: CSD 325 3 Cr. Fall

CSD 542 Audiologic Rehabilitation
Effects of hearing loss on language and communication for children and adults. Interpretation of audiological results. Rehabilitation strategies. Audiogram interpretation and intervention planning.
3 Cr. Spring

CSD 557 Clinical Practice Settings
Operating procedures of the communication disorders professional in a variety of work settings; federal and state legislation; organizing and evaluating programs.
Prereq.: CSD 130 3 Cr. Spring

CSD 560 Language Development
Language concepts, theory, and terminology. Basic principles and parameters of normal language development. Covers prelinguistic, phonological, morphological, syntactic, semantic, and pragmatic areas.
Prereq.: ENGL 361 3 Cr. Fall

CSD 561 Language Disorders: Assessment and Intervention
Description of common language disorders. Strategies for assessing linguistic knowledge and usage. Intervention procedures for the remediation of language disorders.
Prereq.: CSD 460-560 3 Cr. Spring

CSD 566 Augmentative Communication Systems
Non-vocal communication techniques for non-speaking persons. Determining the most appropriate augmentative communication for a particular client and teaching him/her how to use it.
2 Cr. Fall

CSD 568 Child Language Development and Disorders
Language development from birth through adolescence emphasizing content and processes. Recognition of language differences and deficits and suggestions for teaching language skills to the preschool and elementary child. Not open to CSD majors.
3 Cr. Fall | Spring

CSD 569 Intro to Lang, Social Comm & Emotional Reg Issues for Students with Autism
Characteristics of Autism Spectrum Disorders (ASD) that affect individuals' ability to communicate, and the implementation of strategies to improve social-communication and language behaviors for children with ASD.
Prereq.: CSD 460/560 or CSD 468/568 2 Cr. Fall | Spring

Student Learning Outcomes

1. Analyze the range of developmental social communication, language, and emotional regulation skills among individuals with autism spectrum disorders (ASD).
2. Integrate social communication with emotional regulation behaviors of children with ASD, from nonverbal to verbal and conversational stages of communication.
3. Apply interpersonal and learning support strategies commonly used with individuals with ASD to address social communication, language, and emotional regulation needs.
4. Assess the quality of evidence of a variety of intervention strategies used with this population.

CSD 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSD 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSD 601 Aphasia and Related Disorders
Etiologies and characteristics of various types of aphasia and related disorders such as dyslexia and dysgraphia; evidenced based prevention, assessment and intervention methods; and advocacy

of quality of life for people with aphasia.
3 Cr. Fall

Student Learning Outcomes
1. Identify common causes of neurogenic language disorders in adults by listing the various etiologies and describing the neuropathologies.
2. List, analyze and describe characteristics of linguistic and non-linguistic deficits associated with neurogenic language disorders.
3. Describe the general principles of assessment as well as diagnostic appraisal and various measurement tools specific to linguistic deficits.
4. Discuss the general principles of prevention and treatment of linguistic deficits.
5. Discuss the interdisciplinary nature of treatment aspects including the roles and functions of team members, service delivery models and prognostic indicators of recovery.
6. Analyze, evaluate and integrate information about prevention, assessment and intervention of aphasia and related disorders by conducting an assessment (with a patient, simulated patient or case study).
7. Discuss evidence-based practice by analyzing treatment effectiveness studies in the area of neurogenic communication disorders.
8. Write professional clinical assessment reports, skilled treatment procedures, and complete professional oral presentations of patient plans of care in clinical care conferences (with patients/professionals, simulated patients, or case studies).

CSD 602 Dysphagia: Diagnosis and Management

Anatomy, physiology and neurology of normal swallowing; evaluation and treatment of swallowing disorders; related ethical issues.
3 Cr. Fall

Student Learning Outcomes
1. Label and describe anatomical structures and physiological processes related to dysphagia.
2. Compare and contrast scientifically normal and abnormal eating and swallowing in pediatric and adult populations.
3. Describe at least 3 standardized/instrumental and at least 3 informal/perceptual assessment procedures for dysphagia.
4. Locate and integrate information from at least 3 alternative resources to accurately diagnose a dysphagic patient (case studies).
5. Locate and integrate information from evidence-based practice literature to establish appropriate intervention goals for a dysphagic patient (case studies).

CSD 603 Language Disorders in Children

Assessment and remediation of language problems exhibited by pre-school and school-aged children.
3 Cr. Spring

Student Learning Outcomes
1. List and describe significant milestones in preschool language development.
2. Describe the facilitative interdependence of cognition and language during development.
3. List and describe significant milestones of school-age language development and contrast these with preschool language development.
4. Compare and contrast the developmental/descriptive approach, systems approach, etiological-categorical approach, and the functionalist approach to understanding language disorders.
5. Ascertain classroom/vocational considerations when dealing with language and literacy disorders.
6. Analyze etiological and contributing factors of a language disorder through case studies.
7. Describe the systematic steps of assessing child language.
8. Conduct evidence-based, standardized and criterion-based assessment procedures on actual patients or case studies.
9. Plan evidence based remediation programs tailored to individual clients with a variety of diagnoses.
10. Conduct appropriate assessments and interventions for language differences vs. language disorders.

CSD 604 Pediatric Speech Sound Disorders

Theory, assessment and intervention strategies for pediatric speech sound disorders phonology and childhood apraxia of speech.
3 Cr. Spring

Student Learning Outcomes
1. Describe speech sound development in children from birth to adolescence.
2. Discuss distinguishing characteristics of standard types of speech sound disorders for the purpose of diagnosis.
3. Compare and select appropriate assessment protocols that can be used with children with speech sound disorders.
4. Administer, score and interpret standardized,

criterion-referenced and informal assessment tests for children with speech sound disorders.
5. Compare and contrast the merits of the standard evidence based intervention approaches for children with speech sound disorders.
6. Describe standard ways of evaluating the effectiveness of intervention for children with speech sound disorders.

CSD 605 Cognitive-Communication Disorders

Cognitive-linguistic processing; etiology and characteristics of cognitive-linguistic disorders; assessment, intervention and prevention of cognitive-communication deficits.
3 Cr. Spring

Student Learning Outcomes

1. Identify common causes of cognitive communication disorders in adults by listing and describing the various etiologies and neuropathologies.
2. List, analyze and describe characteristics of linguistic and non-linguistic deficits associated with neurogenic cognitive-communication disorders including traumatic brain injury, dementia and right hemisphere damage.
3. Describe the general principles of assessment as well as diagnostic appraisal and various measurement tools specific to cognitive-communication deficits.
4. Discuss the general principles of prevention and treatment of cognitive-communication deficits.
5. Discuss the interdisciplinary nature of treatment aspects including the roles and functions of team members, service delivery models and prognostic indicators of recovery.
6. Analyze, evaluate and integrate information about prevention, assessment and intervention of neurogenic cognitive-communication disorders by conducting an assessment (with a patient, simulated patient or case study).
7. Discuss evidence-based practice by analyzing treatment effectiveness studies in the area of neurogenic cognitive-communication disorders.
8. Write professional clinical assessment reports and skilled treatment procedures and complete professional oral presentations of patient plans of care in clinical care conferences (with patients/professionals, simulated patients, or case studies).

CSD 606 Motor Speech Disorders

Etiologies, diagnoses and evidence-based interventions for disorders of motor planning and motor execution.
3 Cr. Fall

Student Learning Outcomes

1. Describe the major neurological diseases, pathophysiology, and limb/oral symptoms associated with common motor speech disorders.
2. Provide detailed perceptual, acoustic and physiologic descriptions of the speech characteristics that have been observed in each of the major motor speech disorders.
3. Describe procedures for assessing a) oral motor control, b) intelligibility, c) prosody, d) phonation, e) resonance, and d) respiration in patients with motor speech disorders.
4. Identify (from audio recordings) the most distinctive and deviant speech symptoms in each of the major motor speech disorders and use this information to accurately diagnose each of the motor speech disorders.
5. Describe and discuss several evidence-based interventions that have been used with each of the major motor speech disorders. These will include behavioral, instrumental, pharmaceutical, surgical and prosthetic approaches to treatment.

CSD 607 Statistics and Evidence Based Practice for Speech Language Pathologists

Critical evaluation of sampling, descriptive and inferential statistics in treatment effectiveness literature. Evaluation and design of treatment effectiveness research.
2 Cr. Summer

Student Learning Outcomes

1. Critique sampling methods reported in the peer-review literature.
2. Interpret basic descriptive statistics reported in the peer-review literature.
3. Critique the appropriateness of basic probability rules utilized and reported in the peer-review literature.
4. Correctly interpret a variety of descriptive statistics (e.g., mean, proportion, and variance) reported in the peer review literature.
5. Correctly interpret within and between subjects multi-level ANOVA reported in the literature.
6. Design a randomized clinical trial research study, a quasi-experimental experiment research study, and multiple baseline single subject design to assess the effectiveness of clinical intervention.

CSD 608 Capstone One: Ethics, Professional Issues and Technology

Ethics, technology and professional practice issues related to clinical practice in speech language pathology.
1 Cr. Fall

Student Learning Outcomes

1. Describe and discuss the professional association (American Speech-Language Hearing Association) code of ethics, and specifically as it relates to the use of technology in clinical practice.
2. Describe the professional scope of practice and best practice guidelines for the required professional practice areas specified by the professional association (American Speech-Language Hearing Association), and specifically as they relate to the use of technology.
3. Provide alternative solutions for general ethical dilemma/case studies, and dilemmas specifically involving technology, including those experienced personally during on and off-campus clinical practicums and internships 4. Use technology to provide prevention, education, assessment or intervention services for a client/family.
5. Create a portfolio describing professional expertise obtained through academic classes and clinical practicum for a case study integrating no less than two of the required professional practice areas specified by ASHA.

CSD 609 Capstone: Multilingualism and Multiculturalism

Clinical practice of speech language pathology with culturally and linguistically diverse individuals and families across multiple settings.
2 Cr. DEMAND

Student Learning Outcomes

1. Discuss the professional association (American Speech-Language Hearing Association) code of ethics as it applies to culturally and linguistically diverse clients.
2. Describe the professional scope of practice and best practice guidelines for the required professional practice areas specified by the professional association (American Speech-Language Hearing Association) specifically regarding practice with culturally and linguistically diverse clients.
3. Provide alternative solutions for ethical dilemma/case studies related to culturally and linguistically diverse clients, including those experienced personally during on and off-campus clinical practicums and internships.
4. Provide prevention, education, assessment and/or intervention services for a client/family.
5. Create a portfolio describing professional expertise obtained through academic classes and clinical practicum for a culturally or linguistically diverse case study integrating no less than two of the required professional practice areas specified by ASHA.

CSD 610 Capstone: Interprofessional Teams

Interprofessional collaboration in clinical practice in speech language pathology.
2 Cr. DEMAND

Student Learning Outcomes

1. Describe and discuss the American Speech-Language Hearing Association code of ethics as it relates to practice within interprofessional teams.
2. Describe the professional scope of practice and best practice guidelines for the required professional practice areas specified by ASHA, and specifically guidelines for practice within interprofessional teams.
3. Provide alternative solutions for ethical dilemmas/case studies related to practice within interprofessional teams including those experienced personally during on and off-campus clinical practicums and internships.
4. Participate in an interprofessional team of health care and/or education professionals as part of prevention, education, counseling, assessment or intervention services for a client.
5. Create a portfolio describing professional expertise obtained through academic classes and clinical practicum for a case study involving interprofessional collaboration and integrating no less than two of the required professional practice areas specified by ASHA.
6. Create a resume.
7. Create an executive summary outlining professional expertise obtained through academic classes and clinical practicum across the nine professional practice areas specified by ASHA, and also including the capstone areas (ethics, professional practice issues, technology, cultural and linguistic diversity, and interprofessional teams).

CSD 611 Graduate Practicum

On and off-campus graduate clinical practicum.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Integrate theory and research-based knowledge and skill from foundation classes into professional speech language pathology practice.
2. Practice clinical leadership skills in a culturally diverse, rapidly changing clinical setting; engaging in literature review and research to provide high quality and safe client assessment and intervention.
3. Utilize critical thinking in the provision of holistic, evidence-based practice including assessment and intervention that is culturally and ethnically sensitive and addresses the needs of individuals and/or families within the clinical setting.
4. Integrate knowledge and skills of documentation and report writing into clinical practice.
5. Communicate and collaborate with inter-professional teams in the design, management and provision of safe, evidence based, client-centered care.
6. Contribute to improvements in individual and population health through communication disorders educational and prevention programs.
7. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of speech language pathology practice in a clinical setting.

CSD 612 Clinical Internship in an Educational Setting

Off-campus clinical internship in an educational setting.
4 Cr. Spring

Student Learning Outcomes

1. Integrate theory and research-based knowledge and skill from pediatric disorders foundation classes into professional speech language pathology practice in an educational setting.
2. Practice clinical leadership skills in a culturally diverse, rapidly changing, educational setting; engaging in professional development to provide high quality and safe client assessment and intervention.
3. Utilize critical thinking in the provision of holistic, evidence-based practice including assessment and intervention that is culturally and ethnically sensitive and addresses the needs of individuals and/or families within the educational setting.
4. Integrate knowledge and skills of documentation and report writing into clinical practice in an educational setting.
5. Communicate and collaborate with interdisciplinary teams in the design, management and provision of safe, evidence based, client-centered care.
6. Contribute to improvements in individual and population quality of life through communication disorder educational and prevention programs.
7. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of speech language pathology practice in an educational setting.

CSD 613 Clinical Internship in a Medical or Rehabilitation Setting

Off-campus clinical internship in a medical or rehabilitation setting.
4 Cr. Spring

Student Learning Outcomes

1. Integrate theory and research-based knowledge and skill from adult and geriatric disorders foundation classes into professional speech language pathology practice in a medical/rehabilitation setting.
2. Practice clinical leadership skills in a culturally diverse, rapidly changing, medical or rehabilitation setting; engaging in professional development to provide high quality and safe client assessment and intervention.
3. Utilize critical thinking in the provision of holistic, evidence-based practice including assessment and intervention that is culturally and ethnically sensitive and addresses the needs of individuals and/or families within the medical or rehabilitation setting.
4. Integrate knowledge and skills of documentation and report writing into clinical practice in a medical or rehabilitation setting.
5. Communicate and collaborate with interprofessional teams in the design, management and provision of safe, evidence based, client-centered care.
6. Contribute to improvements in individual and population quality of life through communication disorder educational and prevention programs.
7. Integrate professional values of altruism, autonomy, human dignity, integrity and social justice into a personal philosophy of speech language pathology practice in a medical or rehabilitation setting.

CSD 614 Capstone: Professional Issues

Professional practice issues related to clinical practice in speech language pathology.
2 Cr. DEMAND

Student Learning Outcomes

1. Analyze and evaluate the American Speech-Language Hearing Association code of ethics, and specifically as it relates to professional issues in clinical practice.
2. Evaluate the professional scope of practice and best practice guidelines for professional practice areas specified by the American Speech-Language Hearing Association, and specifically as they relate to professional issues.
3. Provide alternative solutions for general ethical dilemmas in case studies, and dilemmas specifically involving speech language pathology professional issues, including those experienced personally during on and off-campus clinical practicums and internships.
4. Analyze and evaluate professional issues related to prevention, education, assessment, intervention or consultation speech language pathology services for clients or families.
5. Create a portfolio describing speech language pathology expertise addressing professional issues in obtained with clients or families.

CSD 620 Research in Speech-Language Pathology

Evaluation and results of original research; experimental design, statistical procedures.
2 Cr. Fall

CSD 624 Language/Communication Assessment and Interventions for Students with ASD

Communication, speech, language, and pragmatic characteristics of children with Autism Spectrum Disorders (ASD), identification and assessment methods, and use of evidence-based practices for teaching communication. Grade of B or higher required to earn the Autism Certificate.
Prereq.: SPED 623 3 Cr. Summer

Student Learning Outcomes

1. Analyze possible communication intents of behaviors for individuals with ASD and design instruction to promote communication alternatives to undesirable behaviors.
2. Write individualized communication goals/objectives that reference observable, measurable, and specific communication behaviors of ASD.
3. Choose and implement evidence-based strategies to improve communication skills of individuals with ASD. Provide environmental and structural accommodations across learning environments for individuals with ASD.
4. Effective skills for collaborating with caregivers and teachers to obtain optimal growth in communication skills of children with ASD.
5. Implement a range of instructional strategies that promote generalization of communication skills. Design procedures, collect and interpret data to document progress, and make necessary changes in communication outcomes for students with ASD.
6. Low and high augmentative/assistive communication options for individuals with ASD.
7. Major communication, speech, language, and pragmatic characterists of students with ASD.
8. Methods to assess speech, language, and pragmatic characteristics of children with ASD, as well as strengths and limitations of instruments.
9. Provide strategies and training for parents, paraprofessionals, and other school staff to work more effectively with individuals with ASD.
10. Skills to use instruments to screen/assess students for eligibility for educational services (ASD, communication) and determine needs.

CSD 625 Social Communication in Autism: Assessment and Intervention

Communication, speech, language, and pragmatic characteristics of children with Autism Spectrum Disorders (ASD), identification and assessment methods, and use of evidence-based practices for teaching communication.
Prereq.: CSD 603 and undergraduate courses in language development and language disorders. 3 Cr. Fall

Student Learning Outcomes

1. Analyze the range of developmental social communication, language, and emotional regulation skills among individuals with autism spectrum disorders (ASD).
2. Integrate social communication with emotional regulation behaviors of children with ASD, from nonverbal to verbal, across conversational stages of communication.
3. Apply interpersonal and learning support strategies commonly used with individuals with ASD to address social communication, language and emotional regulation needs.
4. Assess the quality of evidence of a variety of intervention strategies used with this population.
5. Demonstrate Interprofessional skills in collaborations with individuals with autism and their families.

CSD 630 Neuropsychology

Neural basis of human psychology, including learning, memory, cognition, sensory systems, motivation, emotion, and psychological disorders.
3 Cr. Fall

CSD 636 Diagnostics in Speech-Language Pathology
Evaluation and use of formal and informal diagnostic materials, with an emphasis on interpretation of test results. Includes participation in diagnostic evaluations and writing of diagnostic reports.
2 Cr. Fall

CSD 638 Alaryngeal Speech
Study of theoretical and clinical issues in restoration of communication in the laryngectomized patient.
2 Cr. Fall

CSD 642 Audiological Evaluation and Management for Speech-Language Pathologists
Review of standard audiometric procedures; interpretation of behavioral and physiological audiometric evaluations for pediatric and adult clients; formulation of management strategies for minimizing disabilities caused by hearing loss.
2 Cr. Fall

CSD 649 Graduate Practicum: Off-Campus
Application of theory and research to the treatment of clients with communication disorders in an off-campus setting. May be used to meet requirement of 6 credits of practicum to be completed prior to internship. Permission required.
Prereq.: CSD 648 Coreq.: 1-3 Cr. Fall | Spring | Summer

CSD 670 Seminar: Voice Disorders
Study of current practices in the identification and management of voice disorders.
2 Cr. Spring

CSD 675 Consultation in Communication Disorders
Theories, models and methods of improving clients' communicative abilities through a system approach encompassing family, school, and other support agencies.
2 Cr. Fall

CSD 676 Seminar: Fluency Disorders
Discussion and evaluation of contemporary approaches to the management of fluency disorders in children and adults with an emphasis on stuttering.
2 Cr. Fall

CSD 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSD 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

CSD 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSD 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSD 699 Thesis

Coreq.: 1-6 Cr.

CSD 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CSD 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CSD 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CSD 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CSD 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CSD 795 Selected Topics

May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

Communication Studies (CMST)

CMST 502 Special Topics in Communication Studies

Discussions and readings in advanced speech topics. A specific topic will be listed each time offered. May be repeated to a maximum of 9 credits.
Prereq.: Senior/graduate standing or permission.
Coreq.: 1-3 Cr. DEMAND

CMST 510 Contempoary Issues in Performance Studies

Variable content stressing methods, theories, and subjects in contemporary performance studies, such as performance criticism, performance and gender, performance art, performance and culture, performance of selected literary genres. Specific topics to be announced. May be repeated.
Prereq.: CMST 192 or HONS 170 or equivalent 3 Cr. Spring

Student Learning Outcomes

1. To compare cultural perspectives and communication patterns of individuals from the United States to those of other world regions, such as Asia, Africa, Latin America, or Europe, and the impact of these perspectives on intercultural communication.
2. To identify guidelines for appropriate verbal and nonverbal interaction in various contexts (work, family, educational institutions) with individuals from specific world regions, such as Asia, Africa, Latin America or Europe.
3. To explain the important role of religion in particular world cultures under study, and to identify potential religion-based complications in intercultural communication.
4. To compare/contrast characteristics of a competent communicator in the U.S. and other world regions such as: Asia, Africa, or Western Europe.
5. To apply communication principles in novel interaction situation using case studies, critical incidents, and simulations.

CMST 511 Critical Approaches to Public Communication

Rhetorical criticism of public communication and popular culture, such as speeches, news coverage, and entertainment.
Prereq.: CMST 300 or CMST 319 or permission of instructor. 3 Cr. Fall | Spring

CMST 512 Theories of Persuasion

Persuasion theories applied to selected communication contexts.
Prereq.: CMST 300 3 Cr. Fall | Spring

CMST 520 Advanced Seminar in Relational Communication

Topics concerning the interaction between communicative practices and the construction and evolution of relationships and communities. May be repeated up to 9 credits.
Prereq.: CMST 192, CMST 220 3 Cr. Fall | Spring

Student Learning Outcomes

1. Explain how communication functions to develop personal relationships.
2. Explain how communication functions to maintain personal relationships.
3. Explain how communication functions to transform personal relationships.
4. Demonstrate a familiarity with interpersonal communication theory.
5. Demonstrate a familiarity with interpersonal communication research.

CMST 528 Theory and Practice of Mediation

Theory and practice of mediation and conflict management.
Prereq.: CMST 321 3 Cr. Fall

Student Learning Outcomes

1. Demonstrate understanding of the theory of mediation.
2. Conduct a mediation between two conflicting parties.
3. Demonstrate understanding of the Minnesota statutes and legal rules pertaining to mediation.

CMST 529 Theories of Third Party Intervention

Theory and practice of third party intervention into interpersonal conflict.
Prereq.: CMST 428/528 3 Cr. Spring

Student Learning Outcomes

1. Design a dispute resolution intervention for a given interpersonal conflict.
2. Demonstrate understanding of several third party intervention practices.

3. Explain the role of communication in third party intervention into interpersonal conflict.

CMST 539 Intercultural Communication for the Global Workplace

Theories and principles of intercultural communication applied toward working effectively in international contexts. Cultural synergy in global work contexts. Major intercultural communication challenges for service abroad.
Prereq.: CMST 330 3 Cr. Fall

CMST 541 Organizational Communication

Nature and flow of communication in modern organizations through applied theory, diagnosis and problem-solving skills.
Prereq.: CMST 192 3 Cr. Fall | Spring

CMST 548 Communication and Contemporary Leadership

Education for reflective leadership is provided from the perspective of communication and rhetorical theory. Theoretical concepts of leadership and followership are examined along with skill development, research and critique.
Prereq.: 45 or more credits 3 Cr. Fall

CMST 552 Teaching Communication Studies

Materials and methods for curricular and co-curricular teaching in the secondary schools. Course is designed for students completing the Communication Arts and Literature teaching major.
Prereq.: 12 credits of CMST beyond 192 3 Cr. Spring

CMST 553 Teaching Communication in Grades 5-8

Materials and methods for curricular and co-curricular teaching communication in the middle grades. Focus on content and communication pedagogy. For elementary education students desiring middle school endorsement in Communication Arts and Literature.
Prereq.: CMST 192; ED 200 or ED 300 3 Cr. Fall | Spring

CMST 560 Health Communication

Communication theory and practice in health care contexts.
Coreq.: Cr. Spring

Student Learning Outcomes

1. Analyze the dimensions of communication theory, process and practice that are specific to health care contexts.
2. Describe critical roles that communication plays in various and diverse health care contexts.
3. Identify cultural differences and language barriers facing minority or marginalized populations as they affect communication between clients and providers.
4. Evaluate ethical dimensions and communication responsibilities inherent in all health care contexts.
5. Evaluate the communication exigencies and dimensions of current health care issues including changing populations and world-wide health issues.
6. Apply interpersonal communication skills related to health care interactions.

CMST 561 Current Trends in Health Communication

Discussion of communication topics related to specific health care contexts featuring a variety of speakers from the local health care community.
Coreq.: Cr. Fall

Student Learning Outcomes

1. Identify and analyze challenges to communicating in each of the health care contexts identified in the course.
2. Develop and evaluate solutions for each of the challenges identified for the health care contexts identified in the course.

Community Psychology (CPSY)

CPSY 502 Professional Issues in Addictions

Screening, assessment, treatment planning, case management, crisis intervention, client and community education, professional and ethical responsibilities in addictions treatment. Graduate level project required.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Apply the concepts of screening, assessment, treatment planning, case management and crisis intervention as demonstrated by completion of client file activity.
2. Demonstrate curriculum development in psych-education groups.

CPSY 504 Adult Children of Alcoholic and Other Dysfunctional Families

Adults from dysfunctional families of origin, especially alcoholic; assessment and treatment; healthy adult and family system functioning vs.

unhealthy patterns.
3 Cr. DEMAND

CPSY 530 Seminar
(Same as CEEP 530) Selected topic in psychology. May be repeated to a maximum of 12 credits.
3 Cr. Fall | Spring | Summer

CPSY 532 Instrumentation: Laboratory Equipment
Psychological laboratory equipment including electromechanical and solid-state control, interface, environmental, and data-recording devices.
2 Cr. DEMAND

CPSY 534 Applied Behavior Analysis II
Advanced applied behavior analysis techniques. Design, assessment, and evaluation of behavior change procedures. Current issues.
Prereq.: CPSY 330, CPSY 433-533 3 Cr. Fall | Spring

CPSY 537 Foundations of Addictions
Overview of alcohol and drug counseling focusing on the transdisciplinary foundations of addiction counseling and providing an understanding of addiction theories, the continuum of care and the process of change. Graduate level project required.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Review the history of the addiction field in the United States.
2. Analyze treatment perspectives including the disease concept, psychoanalytic, behavioral and family systems models.

CPSY 538 Addictions Counseling with Selected Populations
Effects of chemical use, abuse, addictions and dependency. Evidence based consultation chemical dependency counseling with adolescents, women, elderly, Native Americans and other culturally diverse populations. Graduate project required.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Evaluate the prevalence of chemical dependency in differing populations.
2. Examine personal cultural beliefs, values and biases.
3. Discuss treatment, recovery and problems in treating chemical dependency in various populations.

CPSY 539 Diagnosis, Intervention and Treatment of Addictions
Screening, intake, assessment, diagnosis, intervention, treatment planning, outcomes, reporting and documentation.
Prereq.: CPSY 437/537 3 Cr. Fall | Spring

Student Learning Outcomes
1. Review relevant treatment models.
2. Review current assessment techniques in the chemical dependency field.

CPSY 541 Experimental Analysis of Behavior
Basic behavioral processes, principles, and theories describing behavior patterns. Quantitative analysis of behavior, experimental preparations, and basic behavior measurement.
3 Cr. Fall

CPSY 545 Chemical Dependency Internship
Supervised chemical dependency clinical experience. Can be repeated up to 12 credits.
Coreq.: 3-12 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Demonstrate the ability to assess substance abuse disorders using current diagnostic criteria.
2. Analyze different treatment techniques as applied to clients in a treatment setting.

CPSY 566 Life Style Assessment and Planning
Examination of human life style issues and their relationship with developing optimum human potential. Participants assess their own life's activities and philosophies with intent to develop a plan for improving their quality of living.
3 Cr. Summer

CPSY 574 Interpersonal Dynamics
Examination of the relationship between interpersonal communication and personal growth including a re-assessment of one's own dynamic relationships.
3 Cr. Summer

CPSY 584 Psychopharmacology and Addictions
Pharmacology and dynamics of addictions, effects of drugs on behavior, emotion and cognition. Prescription and recreational drug overview. Graduate level project required.
3 Cr. Fall | Spring

CPSY 588 Television

Exact nature of the course to be offered on television will be defined by the department.
Coreq.: 1-3 Cr. DEMAND

CPSY 597 Practicum in Behavior Analysis
Practicum experience in behavior analysis. Students will attend agency orientation and gain practical experience in defining and observing behaviors, and the development and implementation of behavioral programs.
Coreq.: CPSY 533 3 Cr. Fall | Spring | Summer

CPSY 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. DEMAND

CPSY 617 Psychological Assessment I
(Same as CEEP) Instruments to assess personality, interests, and attitudes. Objective and projective techniques of personality assessment, personality reports from other mental health specialists, mental health screening such as mental status interviewing, and selection, administration, and interpretation of interest and attitude tests.
Prereq.: CPSY 593 3 Cr. DEMAND

CPSY 618 Psychological Assessment II
(Same as CEEP) Psychological and educational assessment. Administration, scoring, and interpretation of several contemporary psychoeducational tests. Theories, approaches to assessment, and approaches to test interpretation.
3 Cr. DEMAND

CPSY 619 Professional Orientation and Ethics
(Same as CEEP) The applied psychology professions' history, roles, and organizational structure. Ethical standards, laws, licensure, and decision-making processes.
3 Cr. Fall

CPSY 627 Behavior/Social Skills Assessment and Intervention for Students with ASD
Behavior analytic assessment and instructional planning for individuals with Autism Spectrum Disorder. Functional assessment and behavioral treatment planning for challenging behaviors. Grade of B or higher required to earn the Autism Certificate.
Prereq.: SPED 623 and CSD 624; SPED 505 3 Cr. Summer

CPSY 630 Advanced Applied Behavior Analysis
Definition and advanced characteristics of applied behavior analysis. Behavioral principles, processes, and concepts of behavior change procedures and systems support.
3 Cr. Fall

CPSY 633 Behavioral Applications I
Ethics, history, theories, and principles of behavior analysis and therapy. Current techniques, applications to specific populations, behavioral research, and future directions.
3 Cr. Fall

CPSY 634 Behavioral Assessment
Naturalistic observation, self-report inventories, behavioral checklists, other forms of assessment in mental health, schools, business and industry, and health.
3 Cr. Fall

CPSY 635 Behavioral Applications II
Behavior analysis and applications for multiple populations, behaviors, and settings. Functional assessment, research, ethical issues, design, implementation, and evaluation of behavioral programs.
Prereq.: CPSY 633 3 Cr. Spring

CPSY 636 Ethics in Psychology and Behavior Analysis
Responsible conduct during behavioral assessment, behavioral treatment, teaching, supervision, research, and other professional behaviors. Behavior Analyst Certification Board conduct guidelines, APA ethics codes, and Minnesota Board of Psychology standards.
3 Cr. Spring

CPSY 637 Functional Analysis
Components of a "functional behavior assessment (FBA)" including indirect assessment, descriptive analyse, and functional analysis will be examined.
3 Cr. Spring | Summer

CPSY 638 Behavioral Foundations of Autism Treatment
Behavior analytic theory and systems approach in understanding and treating autism. Behavioral treatment models and research. Behavioral consultation models.
3 Cr. DEMAND

CPSY 639 Comprehensive Exam Preparation
Students will review course material and complete practice exercises to assist in preparing for the Comprehensive Examination.
3 Cr. Spring

CPSY 640 Comprehensive Exam
Capstone requirement for students completing M.S. in Applied Behavior Analysis, Plan B.
1 Cr. Summer

CPSY 641 Single-case Design
(Same as CEEP 641) Single-case experimental designs and data analysis procedures for evaluating behavioral change strategies in behavioral intervention programs.
3 Cr. Fall

CPSY 643 Social Bases of Behavior
Psychological approaches to the development and modification of social behavior and phenomena.
3 Cr. Fall | Spring | Summer

CPSY 663 Applied Theories of Learning
Applications to teaching, clinical intervention, and applied behavior analysis.
3 Cr. Fall

CPSY 666 Group Process and Dynamics
(Same as CEEP 666) Concepts, theories and skills related to working with groups.
3 Cr. Fall | Spring

CPSY 669 Supervised Counseling Practicum
(Same as CEEP 669) Application of theory and techniques to counseling.
Prereq.: CPSY 619, CPSY 651, CPSY 667 and CPSY 668
4 Cr. DEMAND

CPSY 672 Couples and Family Counseling: Advanced Theory and Practice
Couple and family theories. The family system in the development of relationship, identity, and mood disturbances. System interventions related to these disturbances.
Prereq.: CPSY 671 3 Cr. Summer

CPSY 675 Research Methods
(Same as CEEP 675) Qualitative and quantitative research designs. Internal and external validity. Needs assessments, program/treatment evaluations, and the critical reading of published research.
3 Cr. Spring

CPSY 679 Seminar: Research Planning
(Same as CEEP) Research design and tools. Development of project outline and presentation to members of the seminar.
2 Cr. DEMAND

CPSY 685 Individual Intelligence Testing
(Same as CEEP) Psychological and educational assessment. Administration, scoring, and interpretation of psychoeducational tests. Synthesizing and integrating test findings.
Prereq.: CPSY 617 3 Cr. Spring

CPSY 690 Selected Topics
Selected topics. Select special title for each offering. May be repeated to a max. of 6 credits.
Coreq.: 1-6 Cr. DEMAND

CPSY 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

CPSY 693 Intensive Practicum in Behavior Analysis
Intensive Practicum in Behavior Analysis meets the experience and supervision requirements of the Behavior Analysis Certification Board. May be repeated; 9 credits required for graduation.
Coreq.: 3-9 Cr. Fall | Spring | Summer

CPSY 694 Selected Topics
Selected topics. Select special title for each offering. May be repeated to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

CPSY 695 Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option. (See Academic Regulations).
Coreq.: 1-3 Cr. DEMAND

CPSY 696 Supervised Internship in Counseling
Supervised agency clinical experience.
Prereq.: CPSY 669 Coreq.: 3-6 Cr. Fall | Spring | Summer

CPSY 697 Supervised Internship in Behavior Analysis
Supervised experience in a community agency.
Coreq.: 3-9 Cr. Fall | Spring | Summer

CPSY 698 Practice in Small Group Process
(Same as CEEP) Supervised practice in conducting small group counseling sessions.
Prereq.: CPSY 666 3 Cr. Fall | Spring

CPSY 699 Thesis

Coreq.: 1-6 Cr. DEMAND

CPSY 730 Advanced Applied Behavior Analysis
Definition and advanced characteristics of applied behavior analysis. Behavioral principles, processes, and concepts of behavior change procedures and systems support.
3 Cr. Fall

CPSY 733 Behavior Therapy I
Ethics, history, theories, and principles of behavior therapy and cognitive-behavior therapy. Current techniques, applications to specific populations, ethical issues and future directions.
3 Cr. Spring

CPSY 734 Behavioral Assessment
Naturalistic observation, self-report inventories, behavioral checklists, other forms of assessment in mental health, schools, business and industry, and health.
3 Cr. Fall

CPSY 735 Behavior Therapy II
Behavior therapy research and applications to specific populations, behaviors, and settings. Functional assessment, ethical issues, design, implementation, and evaluation of therapies for specific populations and behaviors.
Prereq.: CPSY 633 3 Cr. Fall | Spring | Summer

CPSY 741 Single-case Design
(Same as CEEP 641) Single-case experimental designs and data analysis procedures for evaluating behavioral change strategies in behavioral intervention programs.
3 Cr. Fall

CPSY 743 Social Bases of Behavior
Psychological approaches to the development and modification of social behavior and phenomena.
3 Cr. Fall | Spring | Summer

CPSY 763 Applied Theories of Learning
Applications to teaching, clinical intervention, and applied behavior analysis.
3 Cr. Fall

CPSY 775 Research Methods
(Same as CEEP 675) Qualitative and quantitative research designs. Internal and external validity. Needs assessments, program/treatment evaluations, and the critical reading of published research.
3 Cr. DEMAND

CPSY 785 Individual Intelligence Testing
(Same as CEEP) Psychological and educational assessment. Administration, scoring, and interpretation of psychoeducational tests. Synthesizing and integrating test findings.
Prereq.: CPSY 617 3 Cr. Spring

CPSY 801 Psychological Measurement
Psychometric and educational test construction, measurement, reliability and validity, test norms, item analysis, and test interpretation.
3 Cr. DEMAND

CPSY 802 Physiological Psychology
Physiological psychology, structure and function of the nervour system, sensory and motor nervours system, and other topics.
3 Cr. DEMAND

CPSY 805 Assessment & Measurement II: Objective & Projective Personality Assessment
Selection, administration, scoring, and interpretation of objective and projectie tests designed to evaluate personality and/or psychopathology.
3 Cr. DEMAND

CPSY 821 Ethics in Psychology and Applied Behavior Analysis
Responsible conduct during behavioral assessment, behavioral treatment, teaching, supervision, research, and other professional behavior. Behavior Analysis Certificate Board conduct guidelines, APA ethics codes, and Minnesota Board of Psychology standards.
3 Cr. DEMAND

CPSY 831 Assessment and Functional Analysis

Application of Behavioral Principles to the assessment and treatment of complex behavior.
3 Cr. DEMAND

CPSY 836 Advanced Behavior Applications
Behavioral applications in a variety of socially relevant problems stemming from human behavior.
3 Cr. DEMAND

CPSY 838 Assessment: Special Abilities
Cognitive and behavioral assessment techniques applied to individuals with special abilities.
3 Cr. DEMAND

CPSY 839 Autism and Developmental Disabilities
Behavior analytic assessment and program planning for individuals with autism and other developmental disabilities. Training and supervision models. Collaboration with professionals and families.
3 Cr. DEMAND

CPSY 847 Advanced Single Case Design
Reliability and validity of single case, experimental, and quasiexperimental designs.
3 Cr. DEMAND

CPSY 852 Experimental Analysis of Behavior
Basic behavioral processes, principles, and theories describing behavior patterns. Quantitative analysis of behavior, experimental preparations, and basic behavior measurement.
3 Cr. DEMAND

CPSY 886 Practicum in Behavior Analysis
150 hour supervised practicum experience in the application of the principles of behavior analysis.
3 Cr. DEMAND

CPSY 897 Internship I Applied Psychology: Behavior Analysis
Supervised experience in behavioral assessment, program planning, implementation, and monitoring behavioral programs. 2000 hours of supervision in community based agencies.
Coreq.: 3-6 Cr. DEMAND

CPSY 899 Dissertation
Students must complete a total of 12 credits of dissertation.
Coreq.: 6-12 Cr. Fall | Spring | DEMAND

Community Studies (CMTY)

CMTY 522 Land Use Planning and Zoning
Basic and advanced tools, applications, and frameworks of contemporary land use planning and zoning in the United States.
3 Cr. Fall

CMTY 528 Site Planning and Development
Processes and tools for site planning, preparation, development, and implementation.
3 Cr. Spring

CMTY 550 Community Heritage
American shaped environment from colonial period until present. Will focus on meanings of prototypical building forms and analyze key roles a community's shaped environment can play in healthy community development.
3 Cr. Fall

CMTY 551 Community Design
Will examine meaning of design, forces affecting quality of natural and built environments, basic design elements and role of design professional.
3 Cr. Spring

CMTY 552 Environmental Planning
Theory, tools, principles and techniques, policy, regulation, and socio/economic impacts on communities emphasizing sustainable development, land use, economic growth, transportation, and environmental impact and mitigation issues.
3 Cr. Fall

Student Learning Outcomes

1. Identify, recite, explain, and discuss major theoretical concepts, policies, and laws pertaining to environmental planning.
2. Explain current environmental challenges as connected to economic growth, land use, transportation, and waste management issues impacting communities.
3. Collect, analyze, and interpret environmental data.
4. Evaluate and synthesize current information and apply it to appropriate planning and policy decision-making related to Sustainable Planning and Development.

CMTY 554 Regional Planning
Comparative regional planning. Economic distribution and ideological differences. Topical.
3 Cr. DEMAND

CMTY 555 Grant Development
Raising funds for public or non-profit organizations in Minnesota. Project or program design, budget creation, objective and result delineation and writing for grants from foundations, government and corporations.
3 Cr. Spring

CMTY 564 Local Economic Development
Context, theory, process, and practice of local economic development policies for communities.
3 Cr. Spring

CMTY 566 Issues in Community Studies
A seminar on a special topic or issue in Community Studies. May be repeated under different topics.
3 Cr. Fall | Spring | Summer

CMTY 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Computer Networking and Applications (CNA)

CNA 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CNA 525 Data Communications
Communication characteristics and protocols, software packages, set up, theory, and use of local area networks. Detailed coverage and application of the physical and data-link layers of the TCP/IP model.
Prereq.: CNA 397 Coreq.: CNA 426/526 3 Cr. Fall

CNA 526 Computer Networks
Network through application layers of the OSI model.
Prereq.: CNA 397 Coreq.: CNA 425/525 3 Cr. Fall | Spring

CNA 530 Firewall and Penetration Testing
Network access control. Firewall planning, installation, configuration, management, and performance. Network intrusion detection and prevention.
Prereq.: CNA 426 3 Cr. Spring

CNA 531 Offensive and Defensive Security Principles and Techniques
Analysis of vulnerabilities in OSI layer. Architecture and taxonomy of Intrusion Prevention Systems. Anomaly-based and signature-based systems. Virtual honeypots. Techniques and ethics of offensive security.
Prereq.: CNA 426 or ECE 423 or CSCI 413 (or undergraduate or graduate equivalent) or both SE 221 and CSCI 201 or equivalent Coreq.: Cr. Spring

Student Learning Outcomes
1. Analyze security vulnerabilities of protocols in the OSI layer 2. Design secure network architecture for intrusion detection and prevention 3. Apply virtualization techniques, and design virtual honeypots 4. Apply reconnaissance operations, identify attack targets, and create attack payload

CNA 532 OSI Layers Security
Security models and protocols for each OSI layer. Network and Web security implementation, monitoring, intrusion, recovery, and countermeasures.
Prereq.: CNA 426 or consent of instructor 3 Cr. Fall

CNA 533 Security Fundamentals and Laws
Security design principles. Security risk assessment and management. Applied symmetric and asymmetric cryptography. Cyber security laws.
Prereq.: MATH 271 or equivalent and one of the following: CNA 426 or ECE 423 or CSCI 413 or undergraduate or graduate equivalent Coreq.: Cr. Fall

Student Learning Outcomes
1. Identify and use appropriate symmetric and asymmetric encryption algorithms.
2. Analyze the common design pitfalls of security applications.
3. Analyze the limitations of various security key management systems.
4. Interpret the legal issues governing the authorized use of security tools, techniques, technology and data to conduct cyber operations.
5. Quantify the extent of the compliance of cyberspace operations with U.S. law.

CNA 535 Offensive and Defensive Security Principles and Techniques Lab
Hands-on experiments on vulnerability testing, packet crafting, attack target identification, payload generation, and virtualization.

Prereq.: CNA 426 or ECE 423 or CSCI 413 or undergraduate or graduate equivalent Coreq.: CNA 531 Cr. Spring

Student Learning Outcomes

1. Test security vulnerabilities of protocols in the OSI layer 2. Craft malformed packets and analyze response 3. Apply virtualization techniques, and design virtual honeypots 4. Identify attack targets, and generate attack payload

CNA 536 World Wide Web Authoring and Administration

Authoring and implementing web documents. Setting up and administering web servers.
Prereq.: CNA 426-526 3 Cr. Fall

CNA 537 Computer Network Security

Developing an effective network security strategy. Analyzing holes in protocols, designing firewalls, authentication and combatting the Hacker Tools.
Prereq.: CNA 426-526 3 Cr. Spring

CNA 538 Applied Cryptography

Cryptography in secure communications. Secret and Public Key methods. Management of this technology and its relationship to system security policy. Legal and social implications.
Prereq.: CNA 426, MATH 221, MATH 271 3 Cr. Fall

CNA 540 Applied Public Key Infrastructure

Concepts, services, components, and products. Software installation and configuration. Digital certificate implementation.
Prereq.: BCIS 353 or CNA 426 3 Cr. DEMAND

CNA 550 Data Network Performance Analysis

Quantitative evaluation and data networks; pinpointing bottlenecks and corrective strategies.
Prereq.: CNA 426-526, STAT 229, STAT 417 3 Cr. Fall

CNA 551 Data Network Design

Students will develop their own document specifying a hypothetical data network through the use of simulation and case studies.
Prereq.: CNA 426, STAT 239 3 Cr. Spring

CNA 565 Wireless Networks

Design principles and practices, network architectures and protocols, configuration and performance analysis. Future trends.
Prereq.: CNA 426 3 Cr. Fall

CNA 573 Operational Software Safeguards

Implementation of network security policy. Evaluation of hacker tools. Preventative measures. Monitoring attacks and analyzing logs.
Prereq.: BCIS 472 3 Cr. DEMAND

CNA 574 Advanced Network Programming

Advanced network programming or system programming on microcomputers.
Prereq.: CNA 397, CSCI 201 3 Cr. Spring

CNA 575 Cloud Networking

Fundamentals of cloud computing. Virtualization of data centers. Cloud platform architecture. Service-oriented architectures. Applying client/server and peer-to-peer computing in clouds. Cloud programming. Cloud security. Current software platform.
Prereq.: CNA 426, or permission of instructor, MCS 474 Coreq.: CNA 474. 3 Cr. Fall | Spring

Student Learning Outcomes

1. Apply knowledge of networking paradigm and its functioning to cloud computing.
2. Apply essential features of virtualization to data-center automation.
3. Design data-center, interconnection networks, compute and storage clouds.
4. Apply fundamental service-oriented architectures for cloud computing to solve real-world design.
5. Apply cloud computing to Client/Server network model and Peer-to-Peer computing with overlay networks.
6. Develop programming skills with Windows Azure components.
7. Apply strategies and basic techniques for data security, integrity, confidentiality and availability to cloud computing

CNA 585 Contemporary Networking Topics

Contemporary topics in the microcomputer area not covered in other microcomputer courses.
Prereq.: CNA 425, CNA 426 Coreq.: 1-6 Cr. Fall

CNA 588 Type B Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at

the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CNA 590 Practicum in Microcomputers
Supervised programming or installation and administration of software packages. Can be repeated for a maximum of 6 credits.
Prereq.: CNA 426-526 Coreq.: 1-3 Cr. DEMAND

CNA 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CNA 601 Special Topics in Computer Networking
Advanced in-depth study and research involving one or more contemporary topics in computer networking.
Prereq.: CNA 551 Coreq.: 1-3 Cr. DEMAND

CNA 626 Networking Modeling and Simulation
Quantitative analysis and simulation to design solutions to enterprise-wide networking problems.
Prereq.: CNA or a 400-level STAT course; and CNA 451 3 Cr. DEMAND

CNA 650 Research in Applied Computer Networking
Supervised graduate research in advanced applied computer networking. Research analysis and reporting.
Prereq.: CNA 551, STAT 521, STAT 524 3 Cr. DEMAND

CNA 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CNA 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

CNA 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CNA 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CNA 699 Thesis
Thesis credit in applied computer networking.
Prereq.: CNA 650 Coreq.: 1-6 Cr. Fall | Spring | Summer

Computer Science (CSCI)

CSCI 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSCI 502 Introduction to the Theory of Computation
Regular languages, finite-state automata, context-free languages, grammars, push-down automata, Turing machines, Church's thesis, the halting problem and computability.
Prereq.: CSCI 320, MATH 253 or MATH 373 3 Cr. DEMAND

CSCI 503 Theory, Design and Construction of Compilers
Formal grammars, lexical analysis, symbol tables, syntax analysis and parsing, type checking, code generation, code optimization.
Prereq.: CSCI 320, CSCI 330, MATH 373 5 Cr. DEMAND

CSCI 504 Design and Analysis of Algorithms
Computing time functions; maximum, minimum and average computing time of various algorithms.
Prereq.: CSCI 331, MATH 253 or MATH 373 3 Cr. DEMAND

CSCI 506 Formal Methods
Formal methods for specification, validation and verification in software development life cycle. Specification techniques. Formal methods integration with programming languages. Application of formal methods in requirements and safety analysis, testing, software reuse.
Prereq.: CSCI 311, CSCI 330, or permission of instructor. 3 Cr. DEMAND

Student Learning Outcomes

1. Write a quality software requirement document.
2. Apply software requirements to guide program development.
3. Use abstractions and formal methods in the design of programs.
4. Represent knowledge, policies, and verification formally.
5. Specify communication and concurrencies with algebraic methodologies.
6. Test software and assure its quality.
7. Use reusable software patterns.
8. Apply current theories, models, and techniques.

CSCI 511 Database Theory and Design

Principles of database systems, theory of relational databases, design techniques, concurrency control and recovery, object-oriented systems.
Prereq.: CSCI 331 3 Cr. DEMAND

CSCI 512 Distributed Systems Principles

Distributed systems architecture. Process synchronization. Distributed operating systems, file systems and database systems. Projects.
Prereq.: CSCI 311 3 Cr. DEMAND

CSCI 513 Computer Networks

Computer network architecture. The OSI seven-layer reference model and communication protocols. Network services. Projects for current applications.
Prereq.: CSCI 311 3 Cr. DEMAND

CSCI 530 Object-Oriented Software Development

Techniques for identifying and specifying objects, object classes and operations in designing software. Development of a major project using object-oriented analysis, design and programming techniques.
Prereq.: CSCI 301 3 Cr. DEMAND

CSCI 531 Software Engineering I

Software engineering concepts, life-cycle models, software process, team organization and management, software engineering tools, estimation and planning, requirements gathering, analysis, design and implementation, software testing, reusability and portability, encapsulating algorithms, inheritance, patterns of patterns.
Prereq.: CSCI 331 or permission of instructor 3 Cr. DEMAND

Student Learning Outcomes

1. Apply software engineering tools at each step of the software process.
2. Work effectively as part of a team to develop software.
3. Assure software quality.
4. Estimate the time and resources required at each step of software development.
5. Construct effective plans for the development of software.

CSCI 532 Software Engineering II - Large Scale Software Systems

Concepts and methods for the architectural design of large-scale software systems. Design Patterns. Transition of functional descriptions to structure and architectural descriptions. Analysis and design of existing and new architectures. Software engineering techniques to transform sequential programs into multithreaded and parallel programs. Project management. Quality assurance and control, precision, performance, economics.
Prereq.: CSCI 430 or permission of instructor. 3 Cr. DEMAND

Student Learning Outcomes

1. Articulate the requirements of large systems.
2. Design large software systems.
3. Identify problems in the process of software development.
4. Apply modern techniques to software design problems.
5. Identify the main components of large systems.
6. Modify, extend, and combine methodologies.
7. Lead a software development team.
8. Transform sequential programs into multithreaded and parallel programs.
9. Integrate ethical, legal, and economic concerns into software development.

CSCI 533 Software Engineering III - Distributed Software Systems

Concepts and methods for construction of distributed and concurrent software using network protocols. Protection. Client-server programming, component-based software development.
Prereq.: CSCI 311 or permission of instructor. 3 Cr. DEMAND

Student Learning Outcomes

1. Apply network protocols in the design of distributed software products.
2. Build fault-tolerant software products.

3. Integrate security into each stage of the software development cycle.
4. Apply client-server programming and component-based software development.
5. Apply modern and emergent techniques in software development.

CSCI 534 High Performance Software and Systems

Basics of software performance, defining performance objectives UML-based rotations, software execution models, web applications and distributed systems, system execution, data collection, performance measurement, performance-oriented analysis, design and implementation, applications.
Prereq.: CSCI 311, CSCI 430 or permission of instructor 3 Cr. Even Spring

Student Learning Outcomes

1. Measure software performance.
2. Collect data with which to measure software performance.
3. Apply standard rotations with annotations to specify performance requirements.
4. Apply models of software execution.
5. Integrate performance measurement into the design and implementation of software systems.

CSCI 540 Introduction to Artificial Intelligence

Heuristic versus deterministic methods, game playing programs, theorem proving programs, decision making programs.
Prereq.: CSCI 330, MATH 253 or MATH 373 3 Cr. DEMAND

CSCI 541 Neural Networks

Natural and artificial neural networks. Back propagation, conjugate gradients, cascade-correlation training methods, associative memory. Self-organizing nets, adaptive resonance nets, Hopfield nets, constraint satisfaction networks. Design and applications.
Prereq.: CSCI 320 3 Cr. DEMAND

CSCI 542 Expert Systems

Theory and applications of expert systems. Knowledge acquisition and representation. Inference techniques. An expert systems language. Design and evolution of expert systems.
Prereq.: CSCI 301 3 Cr. DEMAND

CSCI 543 Evolutionary Computation

Population-based search heuristics inspired by biological evolution. Representations and operators. Specifying parameter values. Hybridization with local search and other search strategies. Constraint handling. Theory.
Prereq.: CSCI 591, MATH 373 3 Cr. DEMAND

CSCI 550 Computer Graphics

Algorithms, data structures and techniques for generating graphics. Graphics hardware, display primitives, geometric transformations, perspective projection, clipping and user interaction.
Prereq.: CSCI 320, MATH 311 or MATH 312 3 Cr. DEMAND

CSCI 575 Advanced Topics in Computer Science

An in-depth study of one or more issues in contemporary computer science not covered in other computer science courses.
Coreq.: 1-6 Cr. DEMAND

CSCI 588 Type B Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSCI 591 Preparatory Data Structures and Algorithms

Review of programming constructs, abstraction, data structures and algorithms for graphs, trees, strings, sorting and searching.
3 Cr. DEMAND

CSCI 592 Preparatory Computer Architecture

Computer architecture fundamentals.
3 Cr. DEMAND

CSCI 593 Preparatory Systems Software

Concepts of processes, process synchronization and scheduling. Management of primary and secondary storage. File and file systems structure.
3 Cr. DEMAND

CSCI 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of

concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSCI 601 Recursive Function Theory
Computable and primitive recursive functions. Pairing functions and Godel numbers. A universal program and the halting problem. Recursively enumerable sets. Diagonalization.
Prereq.: CSCI 402 3 Cr. DEMAND

CSCI 602 Models of Computation
Computation on strings. Turing machines and the halting problem. Processes, grammars and unsolvable problems. Classifying unsolvable problems.
Prereq.: CSCI 601 3 Cr. DEMAND

CSCI 604 Advanced Data Structures
Advanced techniques for data representation and manipulation and their analysis. Implementation of algorithms that use these techniques.
3 Cr. DEMAND

CSCI 606 Introduction to Parallel Computing
Parallel programming, parallel algorithms, and applications. Architectures, principles of parallel algorithm design, the MPI and open MP programming models.
3 Cr. DEMAND

CSCI 610 Advanced Concepts in Operating Systems
Theory of process synchronization and security. Distributed operating systems. Performance analysis.
Prereq.: CSCI 311 3 Cr. DEMAND

CSCI 615 Computer Security
Issues and techniques in computer security. Fundamentals of computer security and current problems.
Prereq.: CSCI 310 3 Cr. DEMAND

CSCI 620 Advanced Computer Architecture
Advanced computer architectures; quantitative principles of design and performance evaluation; parallel processing, multiprocessing.
Prereq.: CSCI 320 3 Cr. DEMAND

CSCI 621 VLSI Design and Testing
Principles of CMOS VLSI design and algorithms for IC layout. Digital faults, how to test for them and how to design digital circuits that facilitate testability.
Prereq.: CSCI 504 4 Cr. DEMAND

CSCI 641 Machine Vision and Manipulators
Human and machine vision. Image processing algorithms. Mathematical description and analysis of robot manipulators.
Prereq.: CSCI 440 3 Cr. DEMAND

CSCI 642 Natural Language Processing
Formal and natural languages. Grammars and parsing. Ambiguity resolution. Semantics. Scoping of noun phrases. Knowledge representation and reasoning.
Prereq.: CSCI 440 3 Cr. DEMAND

CSCI 644 Graduate Internship
An internship not less than 10 weeks, with any organization performing duties that are relevant to the student's course of study.
Coreq.: 1-6 Cr. DEMAND

CSCI 680 Seminar in Computer Science
Seminar in current topics in computer science. May be repeated to maximum of six credits.
Prereq.: Graduate standing and consent of instructor
Coreq.: 1-2 Cr. DEMAND

CSCI 681 Technical Presentation in Computer Science
Oral presentation with appropriate visual aids on current topics in computer science for a select audience.
Prereq.: One semester of graduate coursework and permission of instructor. 1 Cr. DEMAND

CSCI 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

CSCI 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSCI 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved

program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CSCI 696 Research in Computer Science
Supervised graduate research on advanced computer science topics. Research analysis and reporting.
Coreq.: 1-3 Cr. DEMAND

CSCI 697 Starred Paper in Computer Science
Graduate standing in computer science and consent of student's committee. May be repeated for a maximum of 3 credits.
Coreq.: 1-3 Cr. DEMAND

CSCI 699 Thesis in Computer Science

Coreq.: 1-6 Cr. DEMAND

Counseling Family Therapy (COUN)

COUN 528 Psychodynamics of the Family
Psychological interrelationship during developmental stages of life and role of the community psychologist. Focus on family as a system, the family life cycle and the dynamics of family relationships. Provides solid foundation for individual decisions in partner selection, interactions in committed relationships, and parenting.
3 Cr. Fall | Spring | Summer

COUN 601 Foundations of Mental Health Counseling
Historical , philosophical, societal, economic, political and professional dimensions of mental health counseling and consultation.
3 Cr. Fall

COUN 603 Prevention, Wellness and Crisis Intervention in Counseling
Culturally relevant prevention, wellness, holistic, mindfulness-based and ecological approaches in clinical mental health counseling. Crisis intervention for people during crises, disasters, and other trauma causing events.
3 Cr. Fall

COUN 620 Ethics in Mental Health Counseling
Codes of ethics, laws, and regulations applicable to counseling and professional standards of performance.
3 Cr. Spring

Student Learning Outcomes
1. Apply history and philosophy of the clinical mental health counseling profession to aid in case conceptualization.
2. Define professional mental health counselor roles, functions, and relationships with other human service providers, including strategies for interagency/interorganization collaboration and communication.
3. Identify counselors' roles and responsibilities as members of an interdisciplinary emergency management response team during a local, regional, or national crisis, disaster or other trauma-causing event in written exercises.
4. Model counseling supervision models, practices, and processes including self care strategies appropriate to the counselor role.
5. Describe the role and process of the professional counselor advocating on behalf of the profession and show understanding in contemporary advocacy projects.
6. Apply ethical standards of ACA, professional organizations and credentialing bodies, and applications of ethical and legal considerations in professional counseling as demonstrated in written assignments.
7. Identify professional organizations, including membership benefits, activities, services to members, and current issues.
8. Name professional credentialing, including certification, licensure, and accreditation practices and standards, and the effects of public policy on these issues.

COUN 628 Diagnosis and Treatment of Childhood Disorders
Mental Health diagnostic process and treatment planning for children and adolescents. Use of recognized diagnostic reference in treatment planning.
3 Cr. Summer

Student Learning Outcomes
1. Evaluate ethical considerations of diagnosis and treatment planning for children and adolescents.
2. Identify treatments and medication effects on children in written examinations.
3. Complete diagnostic assessments using recognized diagnostic reference such as ICD, DSM and DC: 0-3 demonstrating classification, interview skills and treatment planning for infants, children and adolescents.
4. Explain psychopathological presentation in

infants, children and adolescents including psychological and family dynamics and treatment response.
5. Assess risk potential and the effects of life threatening symptoms and awareness of child abuse, neglect and reporting policies.
6. Promote principles and practices for optimal mental health in treatment planning to include the interaction of physical health, mental health, social interaction, and spiritual awareness.
7. Apply cultural implications in diagnostic and treatment planning.

COUN 629 Vocational Evaluation and Placement
Vocational evaluation and vocational placement. Placement techniques used in rehab. practice, assessment elements of work samples, psychometric testing, and report writing.
3 Cr. Summer

COUN 651 Counseling Theories
Theoretical approaches to counseling. Application of theory to counseling practice.
3 Cr. Fall

COUN 652 Medical and Diagnostic Factors in Counseling
Application of health issues and diagnosis as related to disability, counseling and psychotherapy.
3 Cr. Spring

COUN 653 Psychosocial, Cultural, and Family Counseling
The psychosocial, cultural, and family factors associated with the counseling process.
3 Cr. Summer

COUN 654 Guidance for Special Needs
Counseling children with special needs. Legislative, assessment, family and programming issues examined.
3 Cr. Spring

COUN 655 Seminar in Rehabilitation Counseling
Topics in the field of Rehabilitation Counseling. May be repeated to a max. of 3 credits.
Coreq.: 1-3 Cr. DEMAND

COUN 658 Multicultural Counseling
Enhancing cultural awareness; developing a knowledge and skill base for concepts, theories, and techniques in multicultural counseling; and counseling practices in a multicultural context.
3 Cr. Spring

COUN 659 Psychodiagnosis and Treatment Planning
Diagnostic process and treatment planning in psychology and rehabilitation. DSM-IV and treatment planning for managed care.
3 Cr. Spring

COUN 664 Counseling Across the Lifespan
Counseling implications for developmental life stages prenatal to death.
3 Cr. Fall

COUN 665 Measurement Techniques
Models of assessment, standardized and non standardized appraisal techniques, statistical concepts, reliability and validity, clinical evaluation approaches, social and cultural factors in assessment and ethical considerations for assessment in counseling.
3 Cr. Spring

COUN 666 Group Counseling Theory and Practice
(Same as CEEP 666) Concepts, theories and skills related to working with groups.
3 Cr. Fall | Spring

COUN 667 Career Development
Developing an informational base related to occupational/educational counseling skills. Theories of career development, collecting and classifying occupational information, and incorporating occupational information into the counseling process.
3 Cr. Fall

COUN 668 Counseling Procedures
Conditions necessary for therapeutic movement to take place in the counseling relationship. Conceptualizing client concerns, establishing goals, and applying therapeutic interventions consistent with these concerns.
Prereq.: Instructor permission, COUN 651 or CPSY 651 3 Cr. Fall

COUN 670 School Counseling Programs and Procedures
Develop effective comprehensive school counseling programs. Use evidence-based best-practices as school counselors to help K-12 students reach their maximum academic, personal, social, and career

development.
3 Cr. Fall

COUN 671 Theories of Marriage and Family Therapy
The systems paradigm. An alternate conceptual framework from which to mount therapeutic interventions. Marriage and family therapy theories. Practicing family therapeutic interventions.
Prereq.: Instructor permission 3 Cr. Spring | Summer

COUN 674 Consultation
Models of consultation and their applications to mental health, school-based, and community settings.
3 Cr. Summer

COUN 676 Research Methods and Program Evaluation
Research methods and application. Program evaluation used in counseling. 3 Cr. SUM.
3 Cr. Summer

Student Learning Outcomes

1. Discuss the importance of research in advancing the counseling profession.
2. Describe counseling research including qualitative, quantitative, single-case designs, action research, and outcome-based research.
3. Demonstrate statistical methods and analyses used in counseling research design and program evaluation.
4. Assess computer software used in counseling, research and program evaluation.
5. Synthesize principles, models, and applications of needs assessment, program evaluation, and the use of these findings to effect program modifications.
6. Strategize the use of research to inform evidence based practice.
7. Prepare ethical and culturally relevant strategies for interpreting and reporting the results of research and/or program evaluation studies.

COUN 677 Stress Management: Process and Techniques
The nature of stress disorders, assessment procedures, and strategies with which to control stress reactions.
3 Cr. DEMAND

COUN 680 Spirituality in Counseling
Spirituality as an integral component of the counseling process; psychospiritual approaches to counseling and psychotherapy; assessment and treatment of spiritual issues.
3 Cr. DEMAND

COUN 684 Psychopharmacology
Examination of the neurological basis of behavior, pharmacokinetics of drug action, effects of psychoactive and psychotherapeutic drugs, and principles of pharmacotherapy.
3 Cr. Fall

COUN 696 Internship in Clinical Mental Health Counseling
Supervised agency clinical experience. May be repeated to a maximum of 15 credits.
Prereq.: CPSY 669 Coreq.: 3-6 Cr. Fall | Spring | Summer

Counselor Education and Educational Psychology (CEEP)

CEEP 501 Credit by Arrangement
Credit by arrangment.
Coreq.: 1-3 Cr. DEMAND

CEEP 528 Psychodynamics of the Family
(Same as LDR). Psychological interrelationships during developmental stages of life. Theories of personality and counseling.
Prereq.: LDR 323 3 Cr. Spring

CEEP 530 Seminar
(Same as LDR 530). Selected topic in psychology. May be repeated to a maximum of 12 credits.
3 Cr. DEMAND

CEEP 588 Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. DEMAND

CEEP 593 Individual Appraisal
Psychological measurement of individuals; instruments used to appraise intellectual efficiency,

aptitude and achievement, sensory capacities and efficiency, sensory-motor coordination, group status, personal history; synthesizing data and report writing.
Prereq.: CEEP 463 or CEEP 665 2 Cr. DEMAND

CEEP 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CEEP 617 Psychological Assessment I
(Same as LDR). Instruments to assess personality, interests, and attitudes. Objective and projective techniques of personality assessment, personality reports from other mental health specialists, mental health screening such as mental status interviewing, and selection, administration, and interpretation of interest and attitude tests.
Prereq.: CEEP 593 3 Cr. DEMAND

CEEP 618 Psychological Assessment II
(Same as LDR). Psychological and educational assessment. Administration, scoring, and interpretation of several contemporary psychoeducational tests. Theories, approaches to assessment, and approaches to test interpretation.
3 Cr. DEMAND

CEEP 619 Professional Orientation and Ethics
(Same as LDR). The applied psychology professions' history, roles, and organizational structure. Ethical standards, laws, licensure, and decision-making processes.
3 Cr. Spring

CEEP 641 Single-case Design
(Same as LDR 641). Single-case experimental designs and data only analysis procedures for evaluating behavioral change strategies in behavioral intervention programs.
3 Cr. Fall

CEEP 645 Foundations of Student Services
Philosophical, theoretical, contextual and practical foundations of practice of the profession of student development in higher education.
3 Cr. Fall

CEEP 646 Counseling Older Persons
Counseling special needs of expressing feelings of loss, identifying new life goals, and adjusting to the emotional stresses of aging.
Prereq.: SSCI 208, PSY 345, SOC 350 3 Cr. DEMAND

CEEP 649 Affirmative Counseling of Women
Affirmative counseling practices of women's lifespan.
3 Cr. DEMAND

CEEP 650 Rehabilitation Orientation and Ethics
Rehabilitation history, philosophy, legislation, organization, and resources. Service delivery and ethical and professional issues.
3 Cr. Fall

CEEP 651 Counseling Theories
(Same as LDR 651). Theoretical approaches to counseling. Application of theory to counseling practice.
3 Cr. Fall

CEEP 658 Multicultural Counseling
(Same as LDR). Enhancing cultural awareness; developing a knowledge and skill base for concepts, theories, and techniques in multicultural counseling; and counseling practices in a multicultural context.
3 Cr. Fall

CEEP 665 Measurement Techniques
(Same as LDR 665). Measurement theory, psychological testing, testing procedures, and test interpretation.
3 Cr. Fall | Spring

CEEP 666 Group Process and Dynamics
(Same as LDR 666). Concepts, theories and skills related to working with groups.
3 Cr. Fall | Spring

CEEP 667 Career Development
(Same as LDR). Developing an informational base related to occupational/educational counseling skills. Theories of career development, collecting and classifying occupational information, and incorporating occupational information into the counseling process.
3 Cr. Fall

CEEP 668 Counseling Procedures
(Same as LDR 668). Conditions necessary for therapeutic movement to take place in the counseling relationship. Conceptualizing client concerns, establishing goals, and applying therapeutic interventions consistent with these

concerns.
Prereq.: CEEP 651 3 Cr. Fall | Spring

CEEP 669 Supervised Counseling Practicum
(Same as LDR 669). Application of theory and techniques to counseling.
Prereq.: CEEP 619, CEEP 651, CEEP 667, CEEP 668 4 Cr. DEMAND

CEEP 672 Family, School and Organizational Partnerships
Families as complex and dynamic systems of interpersonal relationships that interact with schools, and formal and informal community organizations.
3 Cr. Spring

CEEP 673 Issues in Student Development
Development and functioning of college students and the methods and procedures for coping with and/or deterring them and promoting healthful living.
3 Cr. Spring

CEEP 675 Research Methods
(Same as LDR 675). Qualitative and quantitative research designs. Internal and external validity. Needs assessments, program/treatment evaluations, and the critical reading of published research.
3 Cr. DEMAND

CEEP 678 Introduction to Graduate Statistics
Correlation and regression analysis, probability and sampling theory; estimating population parameters, testing hypotheses. Familiarity with descriptive statistics assumed.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Develop an understanding for the application of the scientific method to psychotherapeutic issues. (PO5) 2. Demonstrate knowledge of the components of both quantitative and qualitative research methods. (PO5) 3. Apply critical thinking for ethical issues regarding research and evaluation efforts. (PO 4, PO5) 4. Demonstrate knowledge of the relevant data analytic procedures. (PO5) 5. Develop and write a well-designed research proposal. (PO5, SLO3) 6. Critique published research. (PO5)

CEEP 679 Seminar: Research Planning
(Same as LDR). Research design and tools. Development of project outline and presentation to members of the seminar.
2 Cr. DEMAND

CEEP 681 Practice in Small Group Process
Supervised practice in conducting small group counseling sessions.
Prereq.: CEEP 666 3 Cr. Fall | Spring

CEEP 685 Individual Intelligence Testing
(Same as LDR). Psychological and educational assessment. Administration, scoring, and interpretation of psychoeducational tests. Synthesizing and integrating test finds.
Prereq.: CEEP 617 3 Cr. DEMAND

CEEP 689 Seminar: Research Reporting
Reporting of research planned in 679 and subsequently implemented. Preparation of reports in accordance with APA publication standards and presentation to seminar.
Prereq.: CEEP 679 2 Cr. DEMAND

CEEP 690 Selected Topics
Selected topics. Select special title for each offering. May be repeated to a max. of 6 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CEEP 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

CEEP 694 Selected Topics
Selected topics. Select special title for each offering. May be repeated to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

CEEP 695 Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option. (See Academic Regulations.)
Coreq.: 1-3 Cr. Fall | Spring | Summer

CEEP 696 Supervised Internship in Counseling
Supervised agency clinical experience. May be repeated to a maximum of 12 credits. 6 credits

required for a degree in either School or Rehabilitation Counseling.
Coreq.: 1-6 Cr. Fall | Spring | Summer

CEEP 697 Internship in Student Affairs
Internship for College Student Development master's degree candidates in a student affairs setting under the supervision of a site supervisor. May be repeated to a maximum of six credits.
Coreq.: 1-3 Cr. Fall | Spring

CEEP 699 Thesis

Coreq.: 1-6 Cr. Fall | Spring | Summer

CEEP 778 Introduction to Graduate Statistics
Correlation and regression analysis, probability and sampling theory; estimating population parameters, testing hypotheses. Familiarity with descriptive statistics assumed.
3 Cr. Fall | Spring | Summer

CEEP 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CEEP 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CEEP 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CEEP 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CEEP 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CEEP 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CEEP 863 Life Span Human Development
Advanced study of life-span development, indepth theories related to human development, normal and abnormal developmental trajectories, variations between and within groups/cultures.
3 Cr. DEMAND

CEEP 891 Enrollment Continuation
Intended for doctoral students who have completed all required coursework for a program, but are still working on the dissertation or doctoral field study. Repeatable to 10 credits.
Coreq.: 1-10 Cr. Fall | Spring | Summer

Criminal Justice Studies (CJS)

CJS 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 502 Fundamentals of U.S. Gangs
Formation, continuance, and expansion of gangs; nature of, theoretical explanations for, response to, and public policies related to gangs in the United States; diversity of organization, leadership, membership, and activities within gangs; prison gangs; prevention and intervention.
3 Cr. Even Spring

CJS 511 Organization and Administration in Criminal Justice
Principles of organization and administration in criminal justice. Current theories of organization as they relate to the needs of the criminal justice process.
3 Cr. Fall | Spring | Summer

CJS 515 Corrections: Theory and Practice
Historical development, theories and institutions of punishment and social control. Social systems of prisoners and officers; institutional administration and legal issues in management; policies and strategies of intervention; decision-making in sentencing and parole; and treatment and organization as they relate to the criminal justice process.
3 Cr. Fall | Spring | Summer

CJS 520 Critical Issues in Law Enforcement
Critical issues facing contemporary law enforcement officials in a free society. Ethnic tension, civil disobedience, police conduct, unionization, civil disturbances, and professionalism within law enforcement.
3 Cr. Fall | Spring | Summer

CJS 521 Peace Officers Standards and Training: Administration
Principles of law enforcement, career influences, stress/crisis intervention, crime prevention, community relations, court testimony, and law

enforcement communications, and cultural awareness.
1 Cr. Fall | Summer

CJS 522 Peace Officers Standards and Training: Statutes
Minnesota Statutes relating to Minnesota Criminal Code, of Minnesota Law enforcement procedures relating to search, arrest, confessions, identification, and evidence, and of Minnesota Statutes relating to juvenile justice.
1 Cr. Fall | Summer

CJS 525 Sex Crimes and Sex Offenders
Identification, definition, and codification of deviance as a criminal act; definitions of sex offenses and social response to a sexual offense; treatment efforts and incarceration outcomes for offenders.
3 Cr. Even Spring

Student Learning Outcomes
1. Demonstrate ability to articulate a knowledge base of a history of sexuality, definitions of healthy sexuality, crime and deviance.
2. Critically evaluate the types of sexual offenses, sex offender classifications, sex offender laws, policies, and practices.
3. Analyze the current social and community responses to sex offenders who are released back into the community after a term in confinements.
4. Identify and discuss sex offender prevention policy and procedures.

CJS 530 Criminal Law
Principles of criminal liability, defenses to criminal prosecution, elements of major crimes.
3 Cr. Fall | Spring | Summer

CJS 531 Criminal and Juvenile Procedure
Law of criminal and juvenile procedure from arrest through post-trial proceedings.
3 Cr. Fall | Spring | Summer

CJS 533 Ethical Studies in Criminal Justice
Ethical decisions relating to criminal justice issues.
3 Cr. Fall | Spring | Summer

CJS 540 Law of Corrections
Study of laws regulating sentencing, authority of correctional agencies, prisoners' rights and remedies and community supervision.
3 Cr. DEMAND

CJS 541 Correctional Alternatives
Alternatives to incarceration, including probation, fines, house arrest, electronic surveillance, restitution programs, sentencing to service, community residential facilities, parole and supervised release. Probation and community corrections agent roles and responsibilities; pre-sentence investigation; supervision methods.
3 Cr. Fall | Spring

CJS 545 Crisis Intervention
History, theory and methods of crisis intervention, especially as used in the criminal justice system.
3 Cr. Odd Fall

CJS 546 Child Abuse and the Criminal Justice System
A survey of the response to physical and sexual child abuse by the crimial justice system, including the law, law enforcement, prosecution, courts and corrections.
3 Cr. Odd Fall

CJS 550 Juvenile Justice System
History and development of the juvenile justice system; the role of police and juvenile courts; analysis of dispositional decisions; probation investigation and supervision functions; juvenile corrections.
3 Cr. Odd Fall

CJS 552 Focused Gang Studies: National and International
Global understanding of gangs and gang-related issues; examines the diversity of nationality, organization, leadership, membership, activities, and gender; problem-solving and suppression-based approaches to gangs.
Prereq.: CJS 401, CJS 502 3 Cr. DEMAND

CJS 554 Focused Gang Studies: Prison Settings
Gangs and gang-related issues within the United States correctional system; examines the diversity of nationality, organization, leadership, membership, activities and gender.
Prereq.: CJS 401, CJS 502 3 Cr. DEMAND

CJS 555 Private Security and the Criminal Justice Community
The powers and authority of private security personnel. Stresses requirements and restrictions on private security. Includes criminal and civil liabilities

faced by private security personnel.
3 Cr. Odd Spring

CJS 557 White Collar Crime
Overview of white collar crime, including both corporate and occupational crime. Case studies in applicable criminal law and law enforcement procedures for detection.
3 Cr. Even Fall

CJS 561 Juvenile Legal Process
Legal background and basis for separate juvenile statutes and justice system; legal procedures for arrest, investigation, and adjudication of juvenile offenders; legal cases relating to rights of juveniles; Minnesota procedure.
3 Cr. Even Spring

CJS 565 Community Policing a Diverse Society
Racial sensitivity, cross-cultural competency, gender awareness, deescalation techniques, communication, and sexual orientation issues as key objectives for law enforcement in service to the community from a public safety perspective.
3 Cr. Fall | Spring

CJS 570 Evidence Based Practices
Evidence Based Practices in corrections (risk assessment, LSI-R, risk prediction, effective case management, motivational interviewing, and case planning) as applied to juvenile and adult correctional programs.
3 Cr. Fall | Spring

CJS 573 Criminal Justice and the Media
Analysis of the images of crime and the criminal justice system that are presented through the mass media.
3 Cr. Even Fall

Student Learning Outcomes
1. Describe the mass media's role in the social construction of reality.
2. Examine the content of crime and justice in the news and entertainment media.
3. Describe news media effect on the processing of criminal cases.
4. Describe and analyze the media's influence on the level of violence and crime in society.
5. Describe and analyze the media's influence on public attitudes and perceptions of crime and criminality.

CJS 580 Victimology: Theories and Principles
Types and theories of victimization; international principles; victims' bills of rights; and victim services.
3 Cr. Fall

Student Learning Outcomes
1. Establish a knowledge-base of theories and principles upon which to build comprehension.
2. Develop a greater understanding of the nature of victimity and victimization.
3. Increase critical thinking skills by identifying and discussing applications of appropriate theories within the scope of victimology.
4. Increase verbal communication skills through class discussions.
5. Increase written communication skills through writing assignments.

CJS 582 Victim Services
Principles of victimology and their application in services to victims; victim legislation and rights.
3 Cr. Spring

Student Learning Outcomes
1. Establish a knowledge-base of principles of victimology and services to victims.
2. Develop a greater understanding of the rights of victims and victim services.
3. Increase critical thinking skills by identifying and discussing course material.
4. Increase verbal communication skills through class discussions.
5. Increase written communication skills through writing assignments.

CJS 585 Domestic Violence and Criminal Justice
Criminal justice responses to domestic violence.
3 Cr. Odd Spring

Student Learning Outcomes
1. Identify and discuss major theories and perspectives for domestic violence.
2. Identify and discuss criminal justice intervention strategies and processes.
3. Discuss the role of the criminal justice system in dealing with domestic violence.
4. Increase critical thinking skills by identifying and discussing course material.
5. Increase verbal communication skills through class discussions.
6. Increase written communication skills through writing assignments.

CJS 586 Theories of Crime and Justice

Value and application of theories of crime and justice in research, policy, and the administration of justice.
Prereq.: CJS 111 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Establish a broader base of theoretical knowledge.
2. Increase critical thinking skills by identifying and discussing applications of appropriate theories within the scope of criminal justice research, policy, and the administration of justice.
3. Increase verbal communication skills through class discussions.
4. Increase written communication skills through writing assignments.

CJS 587 Criminal Justice Research Methods

Quantitative and qualitative research designs and their use in criminal justice.
Prereq.: CJS 111, CJS 486, STAT 219 3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Establish a base of knowledge regarding quantitative and qualitative research designs.
2. Increase critical thinking skills by identifying and discussing applications of appropriate research designs within the scope of criminal justice research, policy, and the administration of justice.
3. Increase verbal communication skills through class discussions.
4. Increase written communication skills through writing assignments.

CJS 588 Type B Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program aproval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 589 Seminar in Criminal Justice

Special issues in the fields of corrections, law enforcement, and the general areas of the administration of justice: includes detailed examinations on vital issues and emerging trends which promise to affect the future. May be repeated for a maximum of 6 credits.
3 Cr. Fall | Spring | Summer

CJS 591 Special Gang Studies

Enhance existing academic knowledge about gangs with up-to-date information from the field; network with law enforcement professionals who work with gangs and their issues; field trips; receive gang specialist certification.
3 Cr. Summer

CJS 593 Special Gang Studies: Corrections Track

Enhance existing academic knowledge about gangs in the correctional system with up-to-date information from the field; network with professionals who work with gangs and their issues; field trips; receive gang specialist certification.
Prereq.: CJS 401, CJS 502 3 Cr. DEMAND

CJS 596 Crime Analysis, Mapping and Profiling

Theory and application of spatial analysis techniques and mapping software for development of prevention, intervention and preparedness strategies relative to crime and homeland defense. Review of criminological theories; crime profiling of criminals and geography; role of the crime analyst; methodological, ethical and legal issues in crime mapping; and geographic information systems (GIS) software.
3 Cr. Odd Spring

Student Learning Outcomes

1. Establish a theoretical and analytical modeling knowledge-base of typologies of crime, criminals, and victims.
2. Develop basic spatio-temporal analysis skills using computer software.
3. Inspire interest in geographic information systems and software applications.
4. Increase critical thinking skills by applying course skills to real-world data.
5. Increase verbal communication skills through class discussions.
6. Increase written communication skills through writing assignments.

CJS 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 601 History of Criminal Justice

America's criminal justice system from early English precedents to the late 20th century.
3 Cr. Fall

Student Learning Outcomes

1. Describe and analyze historical developments within the criminal justice system (e.g., prisons, policing, or courts).
2. Describe and analyze the forms of punishment.
3. Describe and analyze rights for offenders and victims.

CJS 611 Advanced Criminal Justice Systems Administration

Advanced seminar on the administration of criminal justice systems: goals, structure, management, leadership, supervision, budgeting and policy formation.
3 Cr. Spring

Student Learning Outcomes

1. Apply major organizational, management, and leadership theories to organizational dynamics.
2. Evaluate how the American Declaration of Independence, the Constitution, and the Bill of Rights, shape criminal justice organizations.
3. Apply major aspects of organizational planning and administration, such as strategic planning, budgeting, supervision and policy formation.
4. Critically discuss the role of politics, technology, culture and change in criminal justice organizations.

CJS 644 Practicum

A supervised practicum in a criminal justice agency in which the student is not employed. Prior approval by Director of Criminal Justice Graduate Program required.
Coreq.: 3-12 Cr. Spring | Summer

CJS 650 Readings

Specific topic in criminal justice. May be repeated with different topic to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

CJS 660 Theories of Criminal Behavior and Justice

Theories about the causes of violence and criminal behavior.
3 Cr. Fall

CJS 661 Juvenile Justice and Schools

School crime and juvenile delinquency; school failure, discipline problems, absenteeism, and dropout; juvenile law, school of law and cases relating to school crime and discipline; corrections and education policies and programs for delinquency prevention.
3 Cr. Fall

CJS 677 Framing and Analyzing Research Problems

Criminal justice research problem formulation and analysis, conceptualization and operationalization, populations and sampling techniques, empirical data collection methods, qualitative and quantitative analysis, research design critique, policy analysis and program outcome evaluation.
3 Cr. Fall

CJS 679 Research in Criminal Justice

Research methodology, including research design, methods of inquiry, application and interpretation of data analyses (t-tests, chi-square tests, analysis of variance, measures of association), and their relationship to criminal justice policies and programs. Statistical software used to analyze criminal justice data.
Prereq.: CJS 677 or permission of instructor. 3 Cr. Spring

Student Learning Outcomes

1. Analyze research designs and methods.
2. Utilize statistical procedures relevant to research studies.
3. Demonstrate skills in using SPSS (Statistical Package for Social Sciences).

CJS 681 Current Problems and Issues in Criminal Justice

Problem areas or issues in the criminal justice system as explored through directed readings in the research literature. May be repeated to max. of 6 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 689 Advanced Graduate Seminar

A self-directed, democratically oriented method of learning whose major purpose is to identify, explore, and share the results of an in-depth analysis of selected topics. May be repeated for a maximum of 9 credits.
3 Cr. Spring

CJS 690 Selected Topics

May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

CJS 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CJS 699 Thesis

Coreq.: 1-6 Cr. Fall | Spring | Summer

CJS 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CJS 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CJS 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CJS 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CJS 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

CJS 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

Digital Humanities (DH)

DH 502 Introduction to Digital Humanities
Issues and problems in design, structure, and platform for born-digital documents, as well as remediating, digitizing, encoding (including metadata), annotating, editing, and curating historical documents to build artifacts, exhibits, and archival resources for the public.
3 Cr. Fall

Student Learning Outcomes
1. Integrate learning from earlier degrees with the new practices of the Digital Humanities.
2. Analyze major philosophical, ethical, legal, and aesthetic questions associated with the creation and remediation of digital texts.
3. Explore implications of the democratization of information and data.
4. Analyze disciplinary practices and improve close reading practices.
5. Analyzing and applying appropriate techniques in the art of electronic distance reading.
6. Engage with texts using the practices of close reading.
7. Interpret and analyze texts and construct context.
8. Contribute to the success of a collaborative effort.

DH 503 Applied Digital Humanities
Build and curate digital exhibits, projects, archives, or websites from digitization to public presentation based on local research.
3 Cr. Spring

Student Learning Outcomes
1. Develop and express empathy for figures from the past or in the present.
2. Formulate research questions, do primary and secondary research, and present the findings in written and spoken discourse.
3. Situate texts in historical, rhetorical, social, political, ethical, and other contexts.
4. Write and organize the text, identify images, and curate links for the construction of a digital exhibit.
5. Collaborate successfully as a leader or participant to research, write, revise, edit, and construct the content of the exhibit.
6. Analyze the rhetorical situation, synthesize the content, choose images and artifacts and manage paragraph- and sentence-level concerns in written assignments.
7. Analyze texts that contextualize the topic of the exhibit with respect to politics, economics, gender, culture, religion, conflict, race, and or social issues.

DH 505 Digital Humanities Servers

Overview of server side capacity, possibilities, and issues for Digital Humanities projects.
3 Cr. Spring

Student Learning Outcomes
1. Identify needs and devise appropriate specifications for the server side of digital projects so they can be programmed.
2. Identify CGI graphics needed and devise specifications so they can be programmed.
3. Explore advantages and disadvantages of various web-based scripting languages for DH applications.
4. Design search parameters to be used ins cripting languages to ensure optimal pattern matching.
5. Supervise the creation of the content and interface for a documented DH project.
6. Explore current technical and research issues in this field.
7. Serve as project manager for a functioning server-side DH application.
8. Document and communicate technical information about server-side projects to potential team members with various levels of expertise and future employers.

DH 504 Client Software in the Digital Humanities

Client-side internet technology like HTML, Cascading Style Sheets, JavaScript, JQuery, and XML. Website design, use of graphics and multimedia on the web, and future directions for digital humanities projects.
3 Cr. Fall

Student Learning Outcomes
1. Create scripts that execute on multiple browsers on multiple operating systems in individual projects.
2. Distinguish between programming and mark-up languages; use mark-up language to reflect the knowledge structure.
3. Apply CSS to control the final appearance of documents and make use of responsive design.
4. Apply client side technologies to manipulate the document object model (DOM) to create interactivity and navigation, dynamically build page elements, and communicate with plug-in technologies in individual projects.
5. Use appropriate technologies to write scripts (like JavaScript, DHTML, CSS, SVG, SMIL, and proprietary scripting languages) to gain familiarity with current practices and future developments in web client-side scripting.
6. Apply vendor-specific technologies to overcome the limitations of general-purpose scripting languages in individual projects.
7. Apply appropriate techniques for script-writing to create animations on the screen.

Economics (ECON)

ECON 501 Credit By Arrangement

Credit By Arrangement.
Coreq.: 1-3 Cr. DEMAND

ECON 505 Intermediate Macroeconomics

Functioning of the economcy as a whole. Determinants and interrelation of the economy's aggregate production, inflation, unemployment, economic growth, business cycles, and monetary/fiscal policies.
Prereq.: ECON 205,ECON 206, MATH 112 or 115 or 211 or equiv 3 Cr. Fall | Spring

ECON 506 Intermediate Microeconomics

Economic processes in the free enterprise system; determination of price, output, and factor services in different market structures.
Prereq.: ECON 205,ECON 206, MATH 112 or 115 or 211 or equiv 3 Cr. Fall | Spring

ECON 520 Economics of Nonprofit Organization

Economic theories of nonprofit and public organizations, their importance in the economy and the structure and performance of not-for-profit firms and public agencies.
Prereq.: ECON 205, ECON 206 3 Cr. DEMAND

ECON 542 Law and Economics

Laws' effects on market and non-market behavior emphasizing the theory of externalities. Contract law, property rights, tort law, and public choice theory.
Prereq.: ECON 205, ECON 206 3 Cr. Spring

ECON 551 Resource and Environmental Economics

The theory of public goods and externalities; analysis of stock resources (e.g., minerals and energy) and flow resources (e.g., foresty and fisheries); environmental economics and public policy analysis: air and water quality, pollution, global warming, biodiversity.
Prereq.: ECON 205, ECON 206 3 Cr. DEMAND

ECON 560 Public Finance

The role of government in the economy with emphasis upon public revenues and expenditures, tax structure, inter-governmental fiscal relations,

fiscal policy, and public debt management.
Prereq.: ECON 205, ECON 206 3 Cr. Fall

ECON 561 Public Economics: State and Local
The economics of state and local government. Public projects, tax and revenue structures, and intergovernmental relations in Minnesota.
Prereq.: ECON 205, ECON 206 3 Cr. DEMAND

ECON 565 Urban and Regional Economics
Analysis of regions, development, location theory, central place theory, local public finance. Urban problems: poverty, transportation, housing, crime, pollution.
Prereq.: ECON 205, ECON 206 3 Cr. Fall | Spring

ECON 570 Economic and Business Forecasting
Business fluctuations and stabilization policies. Forecasting methods; time series and other regression-based techniques for short- and long-term forecasting.
Prereq.: ECON 205, ECON 206; IS 242 or STAT 219 or higher. 3 Cr. Fall | Spring

ECON 571 Money and Banking
Monetary economics, structure and functioning of commercial banks and other financial intermediaries. The Federal Reserve System and its monetary policy tools, goals and targets.
Prereq.: ECON 205, ECON 206 3 Cr. Fall | Spring | Summer

ECON 572 Industrial Organization and Public Policy
Market structure, firm behavior, and market performance. Public policy toward business via government regulation and antitrust policy.
Prereq.: ECON 205, ECON 206 3 Cr. Spring

ECON 573 Labor Economics
Labor as a factor of production; growth of collective bargaining and labor legislation, and its effects upon society.
Prereq.: ECON 205, ECON 206 3 Cr. Spring

ECON 574 International Economics
Trade models, terms of trade, trade patterns, economic integration, and barriers to trade. Balance of trade/payments, exchange rate determination, capital mobility, and open economy policy coordination.
Prereq.: ECON 205, ECON 206 3 Cr. Fall

ECON 578 History of Economic Thought
Historical development of economic analysis and of the ideas of major economic thinkers.
Prereq.: ECON 205, ECON 206 3 Cr. Fall

ECON 580 Area Economic Studies
Economic problems of selected regions, areas, or countries of the world.
Coreq.: 1-3 Cr. DEMAND

ECON 583 Contemporary Economic Problems
Solutions of problems arising from growth and development of modern institutions under the free enterprise system.
3 Cr. DEMAND

ECON 584 The Economics of Immigration
Migration causes, immigration affects on home and destination economies, characteristics of immigrants, and restrictive policies.
Prereq.: ECON 205, ECON 206 3 Cr. DEMAND

Student Learning Outcomes

1. Apply economic theory and empirical methods to the factors which account for migration across and within borders.
2. Distinguish immigrants from native-born persons, in both the source and destination economies, with respect to their economic characteristics (level and quality of skills, education, experience, earnings, occupational choice, for example).
3. Apply economic theory and empirical methods to identify and quantify the economic impact of immigration on the home and host economies.
4. Measure the social and fiscal costs of immigration, the economic contribution immigrants make to a country's growth, and the economic effects on the destination economy of return, repeat, and illegal migration.
5. Analyze the costs and benefits of alternative restrictive immigration policies in a destination country.

ECON 585 Introduction to Econometrics
Model development and statistical testing procedures, applied economic analysis. Model specification, properties of estimation procedures, statistical inference.
Prereq.: ECON 205, ECON 206; IS 242 or STAT 219 or STAT 229 3 Cr. Fall

ECON 586 Introduction to Mathematical Economics

Application of mathematical tools to the problems of micro and macro economic theory.
Prereq.: ECON 406 and MATH 221 3 Cr. Spring

ECON 587 Advanced Topics in Economic Modeling

Mathematics and software used in advanced theoretical and applied economics. Applications of integral calculus, static and dynamic optimization, game theory, linear and nonlinear programming.
Prereq.: ECON 486-586 3 Cr. Fall

ECON 588 Type B Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECON 597 Advanced Topics in Applied Economic Theory

Applications of advanced economic theory. Topics selected by instructor. May be repeated with different topics up to 9 credits.
Prereq.: ECON 405/505 or ECON 406/506 3 Cr. DEMAND

Student Learning Outcomes

1. Apply advanced research methods beyond Econ 405 (Intermediate Macroeconomics) and/or Econ 406 (Intermediate Microeconomics).
2. Construct formal models for economic analysis and/or use experiments to test economic theories.
3. Demonstrate understanding with the research topics at an advanced level chosen by the instructors.
4. Preparation for theoretical courses in economics and/or experimental courses in economics and other related disciplines at graduate (master and Ph.D.) level.

ECON 598 Advanced Topics in Applied Econometrics

Applications of advanced econometric models. Topics selected by instructor. May be repeated with different topics up to 9 credits.
Prereq.: ECON 485-585 3 Cr. DEMAND

Student Learning Outcomes

1. Apply (i) in-depth applications of econometric models in labor economics, international economics, monetary economics, macroeconomics, etc., (ii) advanced econometric modeling beyond Econ 471 (Business and Economic Forecasting) and Econ 485 (Introduction to Econometrics) and (iii) programming for various econometric software.
2. Demonstrate understanding the research topics at an advanced level chosen by the instructors.
3. Preparation for entry-level research positions for business and governments and econometrics courses at graduate (master and Ph.D.) level.

ECON 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECON 601 Readings in Economics

(Topical.) Guided study of individual investigation of special economic problems and/or theoretical topics. Credits and meetings by arrangement. May be repeated with different topic to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

ECON 602 Reading in Economic Education

(Topical.) Guided study of literature in the field and/or its applications. May be repeated with different topic to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

ECON 603 Managerial Economics for Nonprofit and Public Institutions

Development and application of economic theory and methods to decision-making in public and nonprofit institutions.
Prereq.: ECON 205, ECON 206, or ECON 559 or equivalent. 3 Cr. Fall

ECON 605 Macroeconomic Theory

The determination of aggregate output, employment, and prices. National and policy issues and their impacts on economic activity.
Prereq.: ECON 405,406;486 or 586 or equiv;ECON 587 or equiv 3 Cr. Fall

ECON 606 Microeconomic Theory

Theory of behavior of individuals and firms, optimization and markets.

Prereq.: ECON 405,406;486 or 586 or equiv;ECON 587 or equiv 3 Cr. Spring

ECON 610 Economic Education
Economic concepts found in the public school curricula, the economic theories necessary to understand these concepts, and development of models for examination of public policy issues.
3 Cr. DEMAND

ECON 615 Econometrics
Economic theory and statistical inference to specify, estimate, and interpret economic models with emphasis on applied economic analysis. Model specification, lease squares and maximum likelihood estimates of single and simultaneous equations, forecasting and simulation.
3 Cr. Fall

ECON 630 Seminar
Research and seminar presentation on selected economic topics.
Coreq.: 1-3 Cr. DEMAND

ECON 631 Seminar in Economic Education
Research and seminar presentation of topics in economic education.
3 Cr. DEMAND

ECON 632 Research Methodology
Methods in economic research; decision theory and decision making tools; values in economics; problem identifictaion and selection; hypothesis testing, assumptions, model selection.
Prereq.: ECON 405, ECON 406 3 Cr. DEMAND

ECON 640 Economics of Art and Culture
History and functioning of the live performing and fine arts, the functioning of arts markets, financial performance of arts institutions and public policy toward the arts.
Prereq.: ECON 603 3 Cr. DEMAND

ECON 644 Internship
A supervised internship in a business, government, or nonprofit organization. Requires prior approval.
Coreq.: 1-9 Cr. DEMAND

ECON 645 Economic Problems of Underdeveloped Countries
Social and economic development, economic growth theory.
3 Cr. DEMAND

ECON 670 Advanced Economic and Business Forecasting
Economic and business forecasting methods; time series and regression-based techniques for short and long term forecasting.
3 Cr. Spring

ECON 677 Managerial Economics
Economics analysis as an aid in management and control.
3 Cr. Spring

ECON 679 Comparative Economics
The functioning of different economic systems. Comparison of the principles of operation using theoretical systems as a framework for comparison of the social and economic objectives.
3 Cr. DEMAND

ECON 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECON 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

ECON 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECON 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECON 697 Starred Paper (Plan B) Preparation
Designed to provide Plan B (non-thesis) Applied Economics students with individualized, independent guidance on starred paper (Plan B) projects. Starred paper projects are more applied than theses. Typically do not include primary research, can be based on, for example, an expository survey of the literature in a particular area. Some examples of starred paper projects are: a

project related to developing a new program on the job; a project related to the internship experience; and preparation of a survey and analysis of results. Open to Plan B Master's Students Only.
3 Cr. DEMAND

ECON 699 Thesis

Coreq.: 1-6 Cr. DEMAND

Educational Administration (EDAD)

EDAD 502 Overview to Community Education

Overview to Community Education is a graduate class designed to teach students how to establish, operate and maintain, and evaluate a Community Education program. The goal of the course is to leave the student with a clear understanding of what contemporary Community Education is, and how it can be implemented.
3 Cr. Fall | Spring | Summer

EDAD 507 Field Experience: Community Education

Application of understandings and knowledge through on-site school activities. Planned and supervised cooperatively by school district personnel and university professors in compliance with Minnesota license requirements. Minimum of 320 clock hours.
Prereq.: EDAD 502, EDAD 620, EDAD 640 4 Cr. Fall | Spring | Summer

EDAD 509 Situational Leadership

Student development of portfolio material to develop competency in each of the areas specified in the licensure rule. Materials would be reviewed by a SCSU/Community Education Director team of three people. The team will document competency achievement and final oral examination in the field of community education.
3 Cr. Fall | Spring | Summer

EDAD 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

EDAD 601 Introduction to Educational Administration

Pre-assessment of skills for K-12 principal, superintendent, director of special education, or director of community education. Overview of all EDAD programs.
1 Cr. Fall | Spring

EDAD 605 K-12 Principalship

Synthesis and application of skills and knowledge acquired in the administration core courses. The leading role of the K-12 principal and the tasks, duties, and functions inherent in the principalship are examined. Twenty-one performance proficiencies are studied.
3 Cr. Fall | Spring

EDAD 607 Secondary Principalship

Leadership in the secondary school; student management; facilitating change; roles of local, state, and federal agencies; and likely policy directions for the future. Simulations, case studies, and research data. (Should be taken in the first 9 hours of the program in EDAD).
3 Cr. DEMAND

EDAD 608 School Superintendency

To prepare aspiring school administrators with competencies required for successful leadership by providing knowledge of the competencies and examples of practices which demonstrate the application of the stated competencies. Major competencies will include the following: leadership skills, strategic planning, communication, ethics, superintendent-board relationships, and school governance.
3 Cr. Fall

EDAD 609 Supervision of Special Education

Review of approaches, models and practices required for effective supervision of special education and related personnel and programs. Primary emphasis on developing and maintaining effective working relationships with subordinates and others in the school organization.
3 Cr. Fall

EDAD 610 Administrative Leadership

Surveys of theories, models, and dimensions of leadership; introduction to leadership behavior in organizations, planning, decision-making, and assessment.
3 Cr. Spring

EDAD 611 Portfolio Review

Development of an electronic portfolio to qualify for a K-12 principal, director of special education,

director of community education, or superintendent license. The portfolio will be assessed for quality and content.
1 Cr. Fall | Spring | Summer

EDAD 612 Program and Assessment/Evaluation Technique
Becoming a data based decision maker is an important skill for educational leaders. Techniques for determining what type of assessment and evaluation is required and the techniques for gathering data, facts, and impressions from multiple sources regarding all aspects of the educational program to be explored. Students will acquire the skills necessary to effectively plan, evaluate, and manage curriculum programs in elementary, middle-level and high schools.
3 Cr. Fall

EDAD 613 Administration of Special Education
Review of approaches, models and practices required for effective administration of a special education organization. Primary emphasis is placed on understanding organizational structure considerations, critical management functions, and the management of structured organizational change.
3 Cr. Fall

EDAD 616 Special Education Program Development for Administrators
Overview and analysis of models, process requirements and indicators or quality for the design, development, implementation, and evaluation of special education programs. Special focus placed on review of the universe of generic program development components necessary to define a quality special education program.
3 Cr. Spring | Summer

EDAD 619 Legal and Financial Aspects of Special Education for Administrators
Overview of case law, legal standards, financial models, and budgeting practices applicable to the supervisors and administrators of special education programs.
3 Cr. Spring

EDAD 620 Introduction to School Law
Exploration of the relationship between public education and the legal system in the U.S. Particular attention is directed to the roles of the federal, state, and local governments in American schools as well as issues of students rights, curriculum, teacher freedoms, and other areas of crucial concern to school teachers and administrators.
3 Cr. Fall

EDAD 622 Legal Aspects of Educational Administration
Focuses upon legal risk management in two major areas--the administration of the teacher contract and tort liability. Emphasizes knowledge which will empower administrators to assess the legal risks faced by their districts.
Prereq.: EDAD 620 3 Cr. Summer

EDAD 630 Introduction to Personnel Administration
An overview of the personnel functions of school administrators. Particular attention is directed to personnel policies and procedures; the selection, induction, and continuing professional development of faculty; and employee management relations.
3 Cr. Spring

EDAD 631 Advanced Supervision Techniques
Provides students with the skills and knowledge needed to effectively maintain instructional supervision and leadership in school settings.
3 Cr. Fall | Summer

EDAD 632 Assessment for School Leaders
Applied K-12 assessment development process including implementation and evaluation procedures, data-driven decision making, and information management.
3 Cr. Summer

EDAD 633 Curriculum Development for School Leaders
Applied K-12 curriculum development process including implementation and evaluation procedures, school improvement issues, and the change process emphasizing student achievement.
3 Cr. Spring | Summer

EDAD 640 Introduction to School Finance
General introduction to fnding of public education in the U.S.; review of the history, development, and theoretical foundations of education finance; local, state, and federal programs of school finance; alternative structures for education finance; school finance case law; implications for educational programming and management.
3 Cr. Fall

EDAD 646 Auxiliary Functions for School Administrators
School operations for the building and district administrator. Topics include: classified and support personnel, transportation, food service, buildings and grounds, maintenance, health and safety, facility and referenda, planning, use of facilities, and collaborative partnerships.
3 Cr. Spring

EDAD 650 Introduction to School-Community Relations
Developing understanding of communication structures in the community; processes and procedures for working with various publics including parents, community agencies, special interest groups, media, business and industry; dissemination processes to the various publics.
3 Cr. Spring

EDAD 652 Community Relations in School Administration
Skills in promoting effective cooperation between the community and the school district. Focus on communication strategies, team building, and meeting constituent needs from a school district perspective. Emphasis on relations with specialized constituencies, projects, and campaign management.
3 Cr. Summer

EDAD 655 Technical Application in Educational Administration
Study of interrelationship of current and emerging technologies and the administration of K-12 schools. Provides a survey of theory and philosophy of technologies in the educational environment. Emphasis on problem analysis in the application of technology to educational management. Students must register concurrently for IM 655.
3 Cr. DEMAND

EDAD 657 Education Policy
Theory, sources, processes, and structures of education policy. Provides knowledge, understanding, and experience with which to effectively comprehend and manage education policy. Emphasis on identification and understanding of values in a diverse society and their relationship to education policy and schooling.
3 Cr. Summer

EDAD 658 Leadership in Rural Schools
Various aspects of educational leadership in rural settings. Geographic, economic, political, and social contexts in which rural education occurs are considered. Emphasis placed on understanding strengths and limitations of rural schools and the development of skills and attitudes necessary for successful leadership of rural schools.
3 Cr. DEMAND

EDAD 659 Administrative Issues in Minnesota Education
Issues, concerns, and policy requirements in Minnesota public schools. Topics reflect current public policy debate.
3 Cr. DEMAND

EDAD 670 Practicum in Educational Administration
A culminating, year-long experience of structured and supervised administrative projects and activities conducted in school districts. Completion is required within one academic year.
3 Cr. Fall

EDAD 674 Field Experience: Principal K-12
Development of knowledge, skills and understandings through on-site school and district activities. Experience is planned and supervised cooperatively by school district personnel and university professors in compliance with Minnesota licensure requirements of a minimum of 320 clock hours.
Prereq.: EDAD 605, Masters degree 4 Cr. Fall | Summer

EDAD 675 Field Experience: Secondary Principal Students
One-site school activities. Supervised by school district personnel and university professors in compliance with Minnesota licensure requirements of a minimum of 320 clock hours.
Prereq.: EDAD 607, EDAD 642, Master's Degree. 3 Cr. Fall | Spring

EDAD 676 Field Experience: Director of Special Education
Development of knowledge, skills, and understandings through on-site school and district activities. Experience is planned and supervised cooperatively by school district personnel and university professors in compliance with Minnesota

licensure requirements of a minimum of 320 clock hours.
Prereq.: EDAD 609, EDAD 613, EDAD 616, EDAD 619, Masters degree, and an approved program of study
4 Cr. Fall | Summer

EDAD 678 Field Experience: Superintendency
Development of knowledge, skills, and understandings through on-site school and district activities. Experience is planned and supervised cooperatively by school district personnel and university professors in compliance with Minnesota licensure requirements of a minimum of 320 clock hours.
Prereq.: EDAD 608, Masters degree 4 Cr. Spring

EDAD 680 Introduction to Research Developing
Types of research and applications to educational management and leadership; locating, interpreting, and applying research to problems in school administration; identification, evaluation and use of data sources; application of administrative research design to educational management problems.
3 Cr. Fall

EDAD 682 Research Design in Educational Administration
Identifying a research problem in educational administration and developing a complete plan for investigating the problem. Fullfills the Plan A requirement for initiating a thesis.
Prereq.: CEEP 678 3 Cr. DEMAND

EDAD 685 Survey of Research Strategies in Educational Administration
Quantitative (descriptive, quasi-experimental, experimental) and qualitative (historical, case study, participant observation) research designs and their application to education administration. Application of research design to examination of problems in school management and leadership. Review of research ethics.
3 Cr. DEMAND

EDAD 686 Field Study Design
A problem in educational administration, a research proposal for examination of the problem, and a defense of the proposal before. Research design, instrumentation, data analysis, and reporting techniques. Effective written communication skills essential. Credit awarded upon acceptance of proposal by student's committee.
Prereq.: CEEP 678, Master's Degree. 3 Cr. DEMAND

EDAD 687 Assessment Techniques
Determining what type of assessment is required and the techniques for gathering data, facts, and impressions from multiple sources.
3 Cr. DEMAND

EDAD 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

EDAD 694 Field Study in Educational Administration
For the Specialist Degree only. The theory, techniques, procedures, and results of school surveys and field studies. Written field study report required.
Prereq.: EDAD 682, CEEP 678, Master's Degree. 3 Cr. DEMAND

EDAD 697 Current Problems and Issues in School Administration
A different administrative problem or issue each time offered. May be repeated with a different topic to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

EDAD 699 Thesis

Coreq.: 1-6 Cr. DEMAND

EDAD 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

EDAD 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

EDAD 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

EDAD 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

EDAD 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

EDAD 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

EDAD 803 Leader and Program Development
Overview of leadership and doctoral level program expectations.
3 Cr. Fall

EDAD 804 Visioning and the Change Process
Change theory and organizational improvement, the role of the educational leader as the agent of change, how visioning is an essential component of school improvement.
3 Cr. DEMAND

EDAD 806 Human Resource Development
Educational leadership in personnel management, staff selection, evaluation, and professional development. Adult learning theory, goal setting and development of school climate are some of topics covered.
3 Cr. DEMAND

EDAD 807 Collaborative Partnerships
Facilitating the development of collaborative relationships leading to effective partnership actions influencing organization development.
3 Cr. DEMAND

EDAD 814 Educational Policy and Governance
Models, practices, and influences in educational governance. Developing an understanding of forces and strategies used to shape policy and the system.
3 Cr. DEMAND

EDAD 815 Legal, Political Issues
Political and legal issues in education affecting distribution of resources, quality of the learning environment, and leadership strategies.
3 Cr. DEMAND

EDAD 817 Communication Strategies for Educational Leadership
Strategies for communicating with all audiences in the educational community; promotion of educational understanding, excellence, and a positive educational environment for all students.
3 Cr. DEMAND

EDAD 818 Educational Diplomacy
Strategies of crisis management, conflict resolution, and de-escalation theory. Political diplomacy is contrasted with school governance.
3 Cr. DEMAND

EDAD 821 Educational Achievement, Student Learning, and Program Development
Program coherence; development of assessments, teaching and learning, planning and collaborative strategies to improve teacher effectiveness and student learning.
3 Cr. DEMAND

EDAD 823 Twenty-first Century Leadership; Global Understanding
Develop an understanding of how global influences affect leadership, educational organizations, and student learning now and in the future.
3 Cr. DEMAND

EDAD 824 Seminar in Ethical Leadership
Major theories in ethics and the application of ethical behaviors to school leadership, governance, and school improvement.
3 Cr. DEMAND

EDAD 825 Seminar in Organizational Structures
Historical and contemporary theories of organizational structure and application to educational systems in the 21st century.
3 Cr. DEMAND

EDAD 826 Seminar in Leadership Theory and Research
Theories and models of leadership and how leadership affects the purpose and success of organizations.
3 Cr. DEMAND

EDAD 827 Quantitative and Qualitative Research Methods
Research methodology in educational administration with a focus on determining the most appropriate method of inquiry for the proposed investigation.
3 Cr. DEMAND

EDAD 828 Assessment and Information Management for Data Driven Leadership
Capabilities and resources needed by organizational leaders to access, evaluate, and use information to make informed decisions.
3 Cr. DEMAND

EDAD 829 Doctoral Research Design and Methodology

Identify research topics, review related literature, and design a methodology appropriate for further investigation of the issue.
3 Cr. DEMAND

EDAD 891 Enrollment Continuation
Intended for doctoral students who have completed all required coursework for a program, but are still working on the dissertation or doctoral field study. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

EDAD 899 Dissertation
Dissertation.
Coreq.: 1-9 Cr. DEMAND

Electrical and Computer Engineering (ECE)

ECE 501 Credit by Arrangement
Credit by arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECE 511 Advanced Analog Electronics
Design of dc-dc and dc-ac power converters using diodes, power transistors, and thyristors. Line frequency diode rectifiers, phase controlled rectifiers and inverters, switch mode converters and inverters, and resonant converters. Computer simulations. Additional project for graduate credit.
Prereq.: ECE 301, ECE 312 3 Cr. DEMAND

ECE 512 Electrical Machines and Power Systems
Electrical Machines and Power Systems Fundamentals of Electricity, Magnetism, and Circuits, Electrical Machines and Transformers, Generation, Transmission, and Distribution of Electrical Energy.
Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Students will have an ability to apply knowledge of mathematics, science, and engineering through analyzing electricity, magnetism, three phase circuits, active, reactive, apparent power and components for power systems.
2. Students will have an ability to identify, formulate, and solve engineering electrical machines and electrical power systems problems.
3. Students will have an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability through designing a smart grid system.
4. Students will have an ability to communicate effectively by writing professional lab reports.

ECE 521 Computer Architecture and Design
Organization at the register level of a single processor computer. Hardware description language, computer interconnection structures, mainframe memory organization, introduction to advanced architecture. Design projects and a project paper. Additional project for graduate credit.
Prereq.: ECE 323 3 Cr. DEMAND

ECE 522 Microcontroller System Design
Internal structure and operation of different types of microcontrollers. Design methodology for their use. Applications, software and hardware. Labs and design projects. Additional project for graduate credit.
Prereq.: ECE 323 3 Cr. DEMAND

ECE 523 Computer Network Architecture
Data communication basics, network architecture and protocols, fundamentals of computer and communications networks, network simulation and analysis. Special emphasis on hardware. Labs with design emphasis. Additional projects for graduate credit.
Prereq.: ECE 323 3 Cr. DEMAND

ECE 531 Digital and Analog Communications
Information and coding, spectral analysis, baseband pulse and digital signaling, communication components, modulations, bandpass communication systems.
Prereq.: ECE 301, ECE 312 3 Cr. Fall | Spring

ECE 532 Advanced Communications
Selected topics in telecommunication systems and wireless communications. Computer simulation. Additional project required for graduate credit.
Prereq.: ECE 431-531 3 Cr. DEMAND

ECE 533 Wireless Communciations
Wireless communication systems, cellular communication concepts, signal propagation through wireless channels, modulation techniques, effects of slow fading on a digital communication system diversity techniques for fading channels, multiple access techniques for wireless standards. Experiments and projects. Additional projects

required for graduate credit.
Prereq.: ECE 431-531 3 Cr. DEMAND

ECE 540 Seminar
Lectures, readings, discussions on current topics. May be repeated on different topics for a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

ECE 551 Control Systems
Linear time-invariant systems, time domain analysis, root locus, frequency domain analysis, compensator design, state-space techniques, introduction to digital control. Additional project required for graduate credit.
Prereq.: ECE 301 3 Cr. Fall | Spring

ECE 552 Digital Control Systems
Analysis and design of discrete-time systems and compensators, state-space approach, implementation of digital control systems. Other topics might include: fuzzy logic, adaptive filtering and non-linear systems. Additional project for graduate credit.
Prereq.: ECE 451-551 3 Cr. DEMAND

ECE 571 Digital Signal Processing
Components of DSP system, discrete-time signals and z-transform, Fourier analysis (FFT), FIR and IIR filter design methods, and quantization effects. Computer projects and simulations. Additional project required for graduate credit.
Prereq.: ECE 301 3 Cr. DEMAND

ECE 573 Neural Networks
Neural network technology overview, back propagation, conjugate gradient, and cascade-correlation training methods, associative memory, self-organizing nets, adaptive resonance theory net, Hopfield net, constraint satisfaction networks, application and design. Additional project required for graduate credit.
Prereq.: ECE 471 3 Cr. DEMAND

ECE 574 Image Processing
Digital image processing system, elements of visual perception, digital image fundamentals, image representation and description, image transform, image enhancement, image restoration, image encoding, image segmentation, image compression, applications. Lab. Additional project required for graduate credit.
Prereq.: ECE 471-571 3 Cr. DEMAND

ECE 582 Design of Integrated Circuits
Design, and fabrication of integrated circuits. Semiconductor processing and design rules. Designing logic circuits, sense amplifiers, and clock circuits. Yield improvement. Economic and technological trends.
Prereq.: ECE 312 3 Cr. DEMAND

ECE 588 Type B Workshop
Area limited and specific subjects selected before workshop in announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECE 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECE 621 Advanced Computer Architecture and Design
Advanced topics in computer system architecture, real-time computing systems, computer networks, parallel processors, multiprocessors, and methods of modeling and evaluation.
Prereq.: ECE 421-521 3 Cr. Fall

ECE 622 Parallel Computer Architecture
Introduction and justification for parallel processing, choice of CPU, network topologies, desiging a communication network, tight and loose coupling, language and operating systems.
Prereq.: ECE 621 3 Cr. Spring

ECE 623 Advanced Computer Networks
Multimedia networking and application layer internet protocals. Internet working principles, algorithms and protocols. Network security and management.
Prereq.: ECE 423-523 3 Cr. DEMAND

ECE 625 Applied Electromagnetics and Signal Integrity
Reflection, attenuation, and crosstalk. High-speed printed circuit board design including differential

traces, jitter, power systems and clock distribution. Computational electromagnetics.
3 Cr. DEMAND

Student Learning Outcomes
1. Assess signal integrity issues in a high speed circuit.
2. Design high speed circuits while maintainging signal integrity.
3. Analyze signal integrity problems using appropriate tools.
4. Perform basic computational electromagnetics simulations.
5. Design a high speed circuit using appropriate tools.

ECE 631 Digital Communication Systems
Integrated Services Digital Networks (ISDN). Speech-coding Adaptive equalization. Digital modern technique. Representation of system and signal. Carrier and symbol synchronization. Channel coding and interleafing. Spread spectrum signal for digital communications (CDMA). Design projects.
Prereq.: ECE 431-531 3 Cr. DEMAND

ECE 632 Digital Coding of Waveforms
Characteristics of waveforms. Sampling and quantization of waveforms. PCM, DPCM, ADPCM, DM, ADM. Vector quantization. Sub-band coding. Transform coding. Block coding. Trellis Codes, Projects.
Prereq.: ECE 631 3 Cr. DEMAND

ECE 633 Advanced Topics in Wireless Communications
In-depth coverage of one or more of the following topics: Frequency-hopping spread spectrum, direct-sequence spread spectrum, code division multiple access, fading and multipath channels, and synchronization.
Prereq.: ECE 432-532 3 Cr. DEMAND

ECE 644 Internship
Supervised internship.
Coreq.: 1-9 Cr. DEMAND

ECE 647 Technology Management
Problems associated with managing electrical and computer engineering technology, their rapid changes, and security.
3 Cr. DEMAND

ECE 648 System Project Management
Cost estimation, efficient coding in large software projects, hardware design and integration management.
3 Cr. DEMAND

ECE 651 Optimal Control Systems
Introduction to optimization, calculus of variations, dynamic programming, application to design of control systems, quadratic optimal control, computer simulations.
Prereq.: ECE 452 3 Cr. DEMAND

ECE 652 Stochastic Control Systems
Introduction to stochastic systems, stochastic state models, analysis of systems with random inputs, analysis and design of stochastic quadratic control systems, analysis of prediction and filtering systems using stochastic system theory.
Prereq.: ECE 451, ECE 551 3 Cr. DEMAND

ECE 671 Advanced Digital Signal Processing
Overview of z-transform, FFT, 11R and FIR filters. Multirate digital signal processing. Optimum linear filters. Adaptive digital filters. Power spectrum estimation. Wavelet transform. Selected applications of DSP techniques in speech, sonar, radar, communications and image processing.
Prereq.: ECE 471-571 3 Cr. DEMAND

ECE 672 Random Signals and Noise
Probability, random variables, random processes, autocorrelation, and spectral functions. Response of linear systems to random inputs. Estimators, error measurement, and statistical description.
Prereq.: ECE 451-551 or ECE 431-531 3 Cr. DEMAND

ECE 673 Detection and Extraction of Signals in Noise
Decision theory, hypothesis testing, estimation theory, estimation of signal parameters, composite hypothesis problem, Wiener filters, Kalman filters.
Prereq.: ECE 672 3 Cr. DEMAND

ECE 680 Seminar in Electrical Engineering
Seminar in current topics in electrical engineering.
Coreq.: 1-3 Cr. DEMAND

ECE 681 Advanced Integrated Circuit
Semiconductor processing and fabrication techniques. Comparison of Silicon-Gate, NMOS, CMOS, bipolar, and BiCMOS technologies. CAD tools for layout and mask generation. Circuit simulation

tools.
Prereq.: ECE 312, ECE 322, ECE 381 3 Cr. DEMAND

ECE 682 VLSI Design
Computer-aided design of monolithic integrated circuits at the transistor, gate, circuit and subsystem level. Design rules, routing, cell placement and chip layout. Testing strategies for LSI, error correlations, validation, testability, fault tolerance, redundancy and yield improvement.
Prereq.: ECE 482-582 3 Cr. DEMAND

ECE 690 Selected Topics
Special title for each offering. May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

ECE 691 Selected Topics
Special title for each offering. May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

ECE 692 Selected Topics
Special title for each offering. May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

ECE 693 Selected Topics
Special title for each offering. May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECE 694 Selected Topics
Special title for each offering. May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECE 695 Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a students approved program within the workshop limitations established for each program option. (See Academic Regulations.)
Coreq.: 1-3 Cr. Fall | Spring | Summer

ECE 696 Research in Electrical Engineering

Coreq.: 1-3 Cr. DEMAND

ECE 697 Starred Paper in Electrical Engineering
Supervised graduate work in a topic resulting in a starred paper. Starred papers are more applied than a thesis, and can include design projects, a project relating to an internship or job, or a comprehensive review of a topic in electrical engineering.
Coreq.: 1-3 Cr. DEMAND

Student Learning Outcomes
1. Prepare and present a project proposal.
2. Analyze and document a system, circuit, or design technique based on the literature.
3. Present their project orally.
4. Prepare a written report on their project.

ECE 699 Master's Thesis

Coreq.: 1-6 Cr. DEMAND

Engineering Management (EM)

EM 560 Quality Engineering
Production systems, forecasting and time series analysis, inventory systems, capacity and material requirements planning, project planning and operations scheduling, job sequencing. Batch and discrete-parts production. MRPII and JIT and CIM. Technical elective.
Prereq.: MME 331, STAT 353 3 Cr. Fall

EM 561 Facilities Systems Design
Facilities design, industrial time study, measuring takt time, flow analysis techniques, ergonomics, value-added and non-value-added time, line balancing, value stream mapping, application of lean tools, and principles of facilities layout and systems engineering.
3 Cr. Spring

Student Learning Outcomes
1. Determine takt time of a facility.
2. Analyze an assembly line.
3. Evaluate employee fatigue using ergonomic rating chart.
4. Analyze project results in a manner appropriate to the audience.

EM 632 Engineering Economy
Introduction to engineering economy, interest formulas and equivalence, decision making among alternative manufacturing projects, accounting and depreciation as applied to industrial accounting, cost benefit analysis of engineering projects, effect of income taxes on engineering project analysis,

estimating manufacturing cost elements, decisions under risk and uncertainity as applied to manufacturing.
3 Cr. Spring

EM 638 Competitive Technology Management
Engineering strategy; manufacturing processes implementation; concurrent engineering, inventory management; lead-time management, value added trade-offs, and lead design and manufacturing.
3 Cr. DEMAND

EM 660 Engineering Project Management
The holistic and integrative view of engineering project management; the technical and social aspects of complex project network; leading and managing effective engineering project teams.
3 Cr. Fall

EM 661 Industrial Financial Management
Introduction to financial management for engineering managers; focus on optimal management of a firm's assets and financing requirements; financial decision making, financial markets, risk, valuation, long and short term engineering project financing, investing; international and ethical implications; case studies.
3 Cr. DEMAND

EM 662 Supply Chain and Logistics Management
Concepts and methods in supply chain strategies, planning and operations, inventory and information management, warehousing and materials handling systems, logistics, distribution and transportation systems, distribution strategies, supply chain design, and information technology. Integration of functional areas such as purchasing, materials management, and distribution.
3 Cr. DEMAND

EM 663 Engineering Management
Developing high performance teams in technology driven companies, concepts for effective teams; motivation and leadership as applied to engineers and scientists, engineering innovation process, technological change as applied to engineers and scientists, engineering and R&D projects; effectiveness as an engineer.
3 Cr. Spring

EM 664 Production and Operations Management
Production systems, product design and operations, design for manufacturability and design for assembly, FMEA, process design and facility layout, scheduling, operating and controlling the production system, analysis or dependent demand production systems, quality engineering.
3 Cr. Fall

EM 665 Organization Behavior and Performance Management
Theories of human behavior, small group behavior, communication and performance in various organizational structures, individual and interpersonal group behavior, complex organizational behavior; motivating technical employees, case studies in engineering organizations.
3 Cr. DEMAND

EM 666 Research Methods in Engineering Management
Tools of research, problem statement, planning a project, writing a project proposal, qualitative research techniques, quantitative research techniques, formatting and organizing a report.
3 Cr. Summer

Student Learning Outcomes

1. Formulate a problem statement.
2. Analyze research articles.
3. Apply appropriate research methodologies to project proposals.
4. Critique qualitative and quantitative research articles.
5. Analyze appropriate research techniques.

EM 667 Lean Six Sigma
Quality and lean Six Sigma principles, objectives of lean Six Sigma, Lean Manufacturing techniques, sources of waste and elimination techniques, Six Sigma improvement methodologies.
Prereq.: EM 560 3 Cr. Summer

Student Learning Outcomes

1. Apply lean concepts in various industrial situations to eliminate waste and reduce inventory and throughput time.
2. Use statistical tools and quality techniques to problem-solve a given industrial scenario.
3. Develop a continuous improvement plan using quality standards criteria.
4. Apply lean manufacturing principles to improve processes.

EM 680 Special Topics

Emerging manufacturing methods, experiments, design methods, management techniques, or processes applicable to engineering management.
Prereq: graduate student in engineering management or permission of instructor.
Coreq.: 1-4 Cr. DEMAND

EM 681 Seminar
Research and/or application of methods, models or theories in engineering management.
Coreq.: 1-4 Cr. DEMAND

EM 696 Capstone Project
Capstone project in engineering management.
Coreq.: 1-6 Cr. DEMAND

Engineering Science (ENGR)

ENGR 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ENGR 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ENGR 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ENGR 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ENGR 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

ENGR 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ENGR 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ENGR 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

English (ENGL)

ENGL 500 Special Problems in English
A seminar or conference course for advanced students wishing to work out a special problem in an academic area. Can be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

ENGL 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-4 Cr. Fall | Spring | Summer

ENGL 502 Literary Theory and Criticism
The concepts which apply to such problems as the writer's creative process, the various purposes of literary art, form, and techniques, and the responses that literature elicits.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Identify the significant issues in the field of literary theory and criticism.
2. Compare different approaches to literary theory and criticism, such as formalism, cultural studies, and deconstruction.
3. Apply different theoretical and critical frameworks to their own readings of literary texts.
4. Develop critical thinking and writing skills in their analyses of texts through classroom discussions as well as writing assignments.

ENGL 503 Digital Rhetoric, Discourse, and Culture
Impact of technology in humanities and English studies: history, theory, and practice of electronically mediated communication; print and electronic

literacies; modes of discourse and theories of language, community, and self.
3 Cr. Fall

Student Learning Outcomes
1. Apply an array of digital writing and media tools, such as wikis, blogs, podcasts, content management systems, and social networking tools.
2. Recognize the rhetorical dimensions of digital technologies to consider the ways real people and communities use them in socially and culturally motivated ways.
3. Explain the historical and theoretical backgrounds concerning the shift from print to electronic literacies.
4. Evaluate the specific nature of their own print and digital literacies and how those literacies help to construct their identity and connect them with various communities.
5. Explain the ways in which present-day reading and writing practices and writing spaces affect our notions of text, authorship, and publication.
6. Analyze how emergent media over the centuries have refashioned or remediated older media.
7. Analyze how new digital media are converging and are changing our culture and our definitions of self.
8. Interpret social, cultural, and rhetorical issues concerning digital technology and society using appropriate theories.

ENGL 505 Principles and Theories of Professional Communication

Historical, cultural and social exploration of Professional Communication as a situated discourse practice in job and portfolio preparation. Consent of instructor required for undergraduates.
3 Cr. Spring

Student Learning Outcomes
1. Use foundational terminology, theories, and applications used in the professional communication field, enabling students to both define the field as well as identify the relationship between the field and rhetoric.
2. Translate the history, theories, research, technology, and practices of professional communication into professional identities and abilities to become workplace practitioners and researchers.
3. Apply cultural and social perspectives of language and technology to analyze the rhetorical dimensions, functions, and efficacy of workplace artifacts and communication practices.
4. Use methods, concepts, technologies, and theories used in the professional communication field to construct research questions regarding a workplace communication issue, conduct research on that issue, and produce an effective solution to the issue.

ENGL 514 Advanced Studies in American Multicultural Literature

In-depth study of the literature of one or more groups, such as American Indian, African American, Asian American, Jewish American, Latino/a Mexican American, and European American. May be repeated up to 6 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Interpret texts as readers and writers in light of fictional elements (narrative point of view, imagery, tone, etc.).
2. Locate and explicate stylistic and philosophical similarities and dissimilarities, as gathered from texts as well as other primary and secondary sources.
3. Analyze the importance of folk culture, such as storytelling, to both literary production and craftsmanship.
4. Assess the import of gender, race, ethnicity, or nationality to the eye-view of the author.
5. Identify the causes and effects of bifurcated identities.

ENGL 523 Shakespeare II

The texts, background and criticism of Shakespeare.
3 Cr. DEMAND

Student Learning Outcomes
1. Analyze significant portions of Shakespeare's plays and/or poems.
2. Use literary terms appropriately when discussing and writing about Shakespeare's plays and/or poems.
3. Describe or use methods and data by which literary scholars investigate Shakespeare's plays and/or poems.
4. Summarize and evaluate scholarly criticism on Shakespeare's works.
5. Make and defend judgments about Shakespeare's works based on internal evidence and external criteria such as historical evidence and theoretical criticism.

ENGL 524 Milton

Comus, Paradise Lost, Paradise Regained, Samson Agonistes, Areopagitica, and the minor poetry.
3 Cr. Spring

Student Learning Outcomes
1. Develop reading techniques, such as reading slowly, reading texts several times, reading aloud when possible, and annotating texts.
2. Further develop their command of literary terms and concepts and use them appropriately in class discussion, oral presentations, and writing.
3. Research critical questions about the literature and present the results of their research in critical papers and/or oral presentations to the class.

ENGL 530 Principles of Document Content and Design

Theoretical and cultural perspectives on the visual content and design of genres and media in Professional Communication. Instruction and practice in creating print and digital workplace documents.
3 Cr. Spring

Student Learning Outcomes
1. Apply foundational definitions, principles, and theories of document design as a method of communicating content and connect that knowledge to theories of rhetoric and the technologies used to design documents.
2. Identify the design qualities (pages, type, graphics, color, forms, etc.) of documents in particular genres and/or media and evaluate the rhetorical effectiveness of those qualities from a cultural perspective.
3. Apply digital technologies to create rhetorically effective artifacts using appropriate genres and principles of document design.

ENGL 531 The Rhetoric of Style

Theories, principles, and practices of style and its political and ethical relationship to the production of meaning in a variety of discourse communities. Development of effective stylistic competencies and evaluation of style in cultural artifacts.
3 Cr. Fall

Student Learning Outcomes
1. Evaluate the rhetorical effectiveness of a diverse range of texts (such as editorials, blogs, websites, television shows, movies, videos, and advertisements) based upon stylistic characteristics.
2. Explain how socio-cultural and market contexts shape the meaning of rhetorical styles.
3. Analyze the formal properties that constitute a style.
4. Recognize how a rhetoric of style works to construct identities and communities, negotiate power, and create knowledge about social values and beliefs.
5. Situate their own compositional style within a rhetorical framework.

ENGL 532 Rhetoric for Diverse Audiences

Composing and delivery strategies for diverse audiences. Writing for audiences of different cultures, ethnicities, gender and sexual identities, and abilities. Cultural sensitivity and the ethical implications of intercultural rhetorical situations.
3 Cr. DEMAND

Student Learning Outcomes
1. Evaluate the expectations of a variety of culturally diverse audiences.
2. Apply rhetorical principles to communicate with diverse audiences.
3. Respond ethically in intercultural rhetorical situations.
4. Develop composing strategies for diverse audiences.
5. Evaluate rhetorical artifacts with cultural competence.

ENGL 534 Editing and Publishing

Editor's responsibilities and relationships to writers, political and ethical dimensions of editing and editorial processes, and changing purposes and rhetorical constraints of writing for publication.
4 Cr. DEMAND

Student Learning Outcomes
1. Adapt knowledge of a copyeditor's responsibilities and principal tasks to suggest practical strategies an editor can adopt to forge a working relationship with a writer.
2. Select correction codes and symbols with respect to readability, style and correctness as they pertain to publication standards.
3. Prepare print and digital manuscripts by hand-marking texts or using editing software.
4. Apply knowledge of writing as a process to developmental editing choices and copyediting responsibilities.
5. Select from and apply ethical standards pertinent to the gatekeeping and facilitative functions of copyeditors.

ENGL 536 Topics in the History of Rhetoric

The development of rhetoric from its classical origins through the present. May focus on key figures, periods, or concepts.
3 Cr. DEMAND

Student Learning Outcomes

1. Debate the nature of rhetoric.
2. Describe significant texts that have influenced the field of rhetoric.
3. Analyze arguments and practice critical thinking (see AAC&U rubric) 4. Connect the ideas and arguments of significant figures in the field to applications and issues in the present.
5. Write works of their own with awareness of genre and audience.

ENGL 537 Topics in Professional Writing

Focus on a specific field within professional writing such as grant writing, social media writing, or strategies for digital content. Content varies.
3 Cr. DEMAND

Student Learning Outcomes

1. Develop a critical awareness of institutional and disciplinary frameworks 2. Recognize research's relationship with institutional and social exigencies
3. Apply professional research methods to solve problems 4. Apply professional methods to create an effective written response appropriate for a particular purpose, audience, situation and authorial role.
5. Use rhetorical principles to understand and analyze cultural and social perspectives of language and technology to create effective texts 6. Apply theories, concepts and principles of rhetoric and writing to print, visual and digital texts, recognizing and creating genre forms 7. Develop an awareness of disciplinary frameworks, terminology, and critical issues relating to a specific professional field

ENGL 540 Advanced Creative Writing: Drama

The writing of plays at the advanced level.
Prereq.: ENGL 340 3 Cr. Spring

Student Learning Outcomes

1. Investigate and interpret representative texts within the genre.
2. Refine their knowledge of the vocabulary of craft, including effective use of time and space, character and dialogue, stage direction, and visual and physical metaphor 3. Hear their work read aloud; listen, evaluate and respond to the work of their peers in group workshop.
4. Develop, revise, and rewrite their own original stage plays.
5. Assess their own progress and writing process as writers within the genre.

ENGL 541 Advanced Creative Writing: Nonfiction

The writing of nonfiction at the advanced level.
Prereq.: ENGL 341 Coreq.: 1-4 Cr. Fall

Student Learning Outcomes

1. Investigate representative texts and writers within the genre.
2. Refine, through reading and practice, their knowledge of the vocabulary of craft, including the effective use of significant/concrete detail, scene, dialogue, narrative, reflection, structure, figurative language, time, and prose rhythm.
3. Develop, revise, and rewrite their own work in the genre.
4. Evaluate, consider, and respond to the work of their peers in group workshop.
5. Interrogate, within their own work and the work of published authors, the complex issues of memory and truth in creative nonfiction.
6. Assess their own progress and writing process as writers within the genre.

ENGL 542 Advanced Creative Writing: Fiction

The writing of fiction at the advanced level.
Prereq.: ENGL 342 3 Cr. Fall | Spring

Student Learning Outcomes

1. Investigate representative texts and writers within the genre.
2. Refine, through reading and practice, their knowledge of the vocabulary of craft, including the effective use of significant/concrete detail, scene, dialogue, narrative, structure, figurative language, time, point of view and prose rhythm.
3. Experiment with and imagine new subjects and structures for their work.
4. Develop, revise, and rewrite their own work in the genre 5. Evaluate, consider, and respond to the work of their peers in group workshop.
6. Assess their own progress and writing process as writers within the genre.

ENGL 543 Advanced Creative Writing: Poetry

The writing of poetry at the advanced level.
Prereq.: ENGL 343 3 Cr. Fall | Spring

Student Learning Outcomes
1. Analyze representative texts and writers within the genre.
2. Students will create poems based on careful observation, using precise, specific sensory language.
3. Evaluate and respond to the work of their peers in group workshops.
4. Produce, revise and edit a portfolio of their own writing within the genre.

ENGL 545 Mississippi River Creative Writing Workshop
Writing and discussion of poetry, fiction, and other forms. Presentations by visiting professional authors. No prerequisites. Not a substitute for 340, 341, 342, or 343. May be repeated to 4 credits.
2 Cr. Summer

ENGL 547 Practicum in Creative Writing
Advanced projects in creative writing, including literary magazine editing and other advanced editing or writing projects. Repeatable to a maximum of 8 credits.
Coreq.: 1-4 Cr. Fall | Spring

Student Learning Outcomes
1. Interpret various selections in the literature genres [i.e., poetry, fiction, novels and/or screenwriting].
2. Evaluate and respond to the writing of their peers in group workshops. Workshops may apply principles of selection for publication.
3. Apply the techniques of writing and editing to produce a portfolio of publishable quality work or a university literary magazine publication.

ENGL 551 Advanced Language Arts Pedagogy
Theory and pedagogy in rhetoric, composition, literature, and language for grades 5-12. Professional development demonstrated in protfolios. May be repeated to max. of 6 credits.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Differentiate curriculum to accommodate learners with varying abilities.
2. Demonstrate how to scaffold curriculum to maximize student understanding.
3. Integrate multiple activities and texts in a curriculum unit to provide learners with both breadth and depth on a topic.
4. Understand and apply theories associated with writing pedagogy.
5. Evaluate learners' progress using multiple forms of assessment.

ENGL 553 Topics in Teaching Composition
Strategies and theories for teachers of English/Language Arts. Themes and format vary. Sample topics: recent theory and practice, evaluation methods, portfolio development. May be repeated to a max. of 6 credits.
3 Cr. DEMAND

ENGL 554 Teaching Young Adult Literature
Theory, background and reading of young adult literature as applied to 5-8 grade teaching. Focus on genres and reading strategies.
Prereq.: ED 200 or ED 300 3 Cr. Fall | Spring

Student Learning Outcomes
1. Distinguish among the various genres of Young Adult Literature (YAL).
2. Analyze and interpret fiction using common elements of literature.
3. Evaluate various texts for age appropriateness, quality, and diversity.
4. Examine professional resources related to YAL.
5. Construct teaching activities/plans to deepen students' understanding of literary texts.

ENGL 559 Seminar in Teaching Literature
Methods, theory, and practice for teaching grades 5-12. Variable topics and format. Sample topics: multicultural literature, the canon, young adult literature, genre, theme, literacy. May be repeated to a max. of 6 credits.
3 Cr. DEMAND

ENGL 560 Teaching English Language Learners in K-12
Theory and methods for English Language Learners and bilingual education for non-ESL and non-bilingual teachers. Issues for English Language Learners and instructional strategies.
2 Cr. Fall | Spring | Summer

ENGL 561 Teaching ESL: Theory and Methods
Linguistics and language acquisition theory. Emphasis on the variety of methods used in teaching English as a second language with special attention to oral skills.
Prereq.: ENGL 361 3 Cr. DEMAND

ENGL 562 TESL Methods: Reading and Writing

Application of TESL theory and methods to the teaching of reading and composition, including psycholinguistic models, the process approach, and contrastive rhetoric.
Prereq.: ENGL 561 3 Cr. DEMAND

ENGL 563 ESL and Culture
Preparation of ESL teachers for the multicultural experience of the ESL classroom. Original research in schooling across cultures and on the teaching of culture in ESL.
Prereq.: ENGL 561 3 Cr. DEMAND

ENGL 564 English Syntax
Application of modern linguistics to the description of English grammar, including an introduction to the theories and methods of structural and generative-transformational grammars.
Prereq.: ENGL 361 3 Cr. DEMAND

ENGL 565 History of the English Language
The development of English sounds, grammatical structures, and vocabulary from Old English to Modern English; the reading and analysis of selected texts.
Prereq.: ENGL 361 3 Cr. Fall

ENGL 566 American English
Spoken American English, its historical development, contemporary social, ethnic, gendered, and regional varieties, and the implications of language variation for educational.
Prereq.: ENGL 361 3 Cr. DEMAND

ENGL 567 Topics in TESL
Variable topics in teaching English as a second language and second language acquisition, stressing the integration of theory, method, and practice.
Prereq.: ENGL 461 3 Cr. DEMAND

ENGL 569 Topics in Linguistics
One or more topics of current importance in linguistics.
Prereq.: ENGL 361 3 Cr. DEMAND

ENGL 573 Introduction to Phonology
Application of phonological theories to the description of sounds, sound structure, phonological processes with application to speaking and reading.
Prereq.: ENgL 361 3 Cr. Spring

ENGL 577 TESL Student Teaching
Supervised teaching for students with the TESL minor leading to Pre K-12 ESL licensure.
4 Cr. Fall | Spring

Student Learning Outcomes
1. Apply educational principles relevant to the physical, social, emotional, moral, and cognitive development of children, preadolescents, and adolescents.
2. Apply the research base for the best practices of kindergarten and primary, intermediate and middle level, and high school education.
3. Develop curriculum goals and purposes based on the central concepts of English as a second language and know how to apply instructional strategies and materials for achieving student understanding.
4. Analyze the role and alignment of district, school, and department mission and goals in program planning.
5. Analyze the need for and how to connect students' schooling experiences with everyday life, the workplace, and further educational opportunities.
6. Integrate the involvement of representatives of business, industry, and community organizations as active partners in creating educational opportunities.
7. Analyze the role and purpose of cocurricular and extracurricular activities in the teaching and learning process.
8. Apply the standards of effective practice in teaching students through a variety of early and ongoing clinical experiences with kindergarten and primary, intermediate and middle level and high school students within a range of educational programming models.

ENGL 581 Topics in Literature
A literary theme, genre, or major author considered in the relevant historical, cultural, and critical contexts. May be repeated with a different topic.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Work closely with one significant genre of literature and/or a major author who is not represented in our normal offerings. Dante and Dostoevsky are recent examples.
2. Identify and evaluate connections between literary texts and historical events.
3. Use literary terms appropriately when discussing and writing about medieval literature.
4. Formulate arguments about literature using close

reading and theoretical approaches such as historicism, feminist criticism, etc.

ENGL 588 Type B Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ENGL 593 Women in Literature

Women's literature in multiple genres in at least two time periods and with a comparative view of at least two cultures, preferably also including a non-Western culture.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze how English literatures by women and about women evolve through various eras and cultures.
2. Analyze a smaller sampling of literature in translation by women and about women, again through various eras and cultures.
3. Analyze how gender shapes a literary characterization, in addition to attributes such as race, class, religion, nationality, ethnicity, sexual identity, physical ability and age.
4. Analyze how gender shapes a literary characterization, in addition to attributes such as race, class, religion, nationality, ethnicity, sexual identity, physical ability and age.

ENGL 600 Special Problems

Independent study for advanced students. May be repeated to a max. of 3 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ENGL 602 Literary and Critical Theory

Major texts representing both historical background of the field and its current issues.
3 Cr. Spring

ENGL 603 Research Methods in Rhetoric & Writing: Interpretive & Qualitative Designs

Theory-driven and qualitative research methods and methodologies in rhetoric, composition, and professional communication. Assumptions, practices, and ethics of methods through interdisciplinary readings and analysis of texts and journal articles.
3 Cr. Spring

Student Learning Outcomes

1. Students will identify how the field of rhetoric and writing is positioned in the research spectrum.
2. Students will differentiate between critical-interpretive, qualitative and quantitative research, methods and methodologies.
3. Students will recognize and evaluate methods and methodologies commonly used in the field of rhetoric and writing.
4. Students will design a research project appropriate to the field of rhetoric and writing, including the location of a suitable research issue or site, development of a relevant and important research question situated in the discipline, determination of best methods to collect data and to analyze data.

ENGL 605 Introduction to Graduate Studies in Rhetoric

Rhetoric and its primary subfields. Develops students' professional identities in terms of specific reading, writing, and analytical abilities necessary for success in rhetoric.
3 Cr. Fall

ENGL 606 Introduction to Graduate Studies in English

English research methods and application of theories in fields of literature, language, and writing.
3 Cr. Fall

ENGL 607 Research in English: Empirical Designs

Empirical research as applied to rhetoric/composition and ESL: design, research methodology, and interpretation, with some attention to statistical procedures.
Prereq.: ENGL 606 3 Cr. Fall

ENGL 608 Seminar in World Literatures

Literature from any region of the world except England or the United States: style, genre, historical, or regional.
3 Cr. DEMAND

ENGL 609 Contemporary Thought in Literature

A study of the philosophical and cultural content of selected contemporary writings.
3 Cr. DEMAND

ENGL 610 Seminar in American Literature through the Civil War
Study of one or more important authors, such as Franklin, Poe, Thoreau, Hawthorne, and Whitman.
3 Cr. DEMAND

ENGL 611 Seminar in American Literature of the Later Nineteenth Century
The writings of one or more major literary figures, such as Twain, James, Dickinson, Howells, and Crane.
3 Cr. DEMAND

ENGL 612 Seminar in American Literature of the Early Twentieth Century
Selected studies in American literature from early to mid twentieth century.
3 Cr. DEMAND

ENGL 613 Seminar in American Literature of the Later Twentieth Century
Selected studies of American literature from mid twenieth century to the present.
3 Cr. DEMAND

ENGL 620 Topics in Early English Literature
Selected major works in English literature from Beowulf to Malory. Varied content.
3 Cr. DEMAND

ENGL 621 Seminar in English Renaissance Literature
The literary works, background, and criticism of the poetry, prose, and drama of selected principle writers of the English Renaissance.
3 Cr. DEMAND

ENGL 622 Seminar in Literature of the Renaissance and Early Modern Period
Study of genres, authors, and themes in the context of cultural movements: Renaissance, Enlightenment, and Revolutions from the 15th to the 18th centuries. Content varies.
3 Cr. DEMAND

ENGL 623 Shakespeare Studies
The text and sources, theories, and history of representative comedies, tragedies, and histories.
3 Cr. DEMAND

ENGL 627 Seminar in Nineteenth-Century British Literature
A selected aspect of nineteenth-century British literature. Content will vary.
3 Cr. DEMAND

ENGL 628 Seminar in Modern and Contemporary English Literature
Selected aspects of modern or contemporary English literature and ideas in context.
3 Cr. DEMAND

ENGL 631 History of Rhetorical Theory
The development of rhetoric from its classical origins through the present. Focus on theories and how they affect our understanding of literacy and writing in contemporary applications.
3 Cr. DEMAND

ENGL 632 Specialized Studies in Critical Literacy
Topics in specialized areas and practices of critical literacy such as cultural rhetorics, new media, and critical pedagogies. May be repeated up to a maximum of six credits.
3 Cr. DEMAND

ENGL 633 Specialized Studies in Professional Communication
Topics in specialized areas and practices of Professional Communication such as visual rhetoric, rhetoric of science and technology, or special research methods.
3 Cr. DEMAND

ENGL 636 Rhetoric, Critical Theory, and Cultural Studies
Cultural studies as a mode of rhetorical and critical inquiry. Analyzing cultural artifacts to understand the social, political, and economic impact on individuals and communities.
3 Cr. Spring

ENGL 640 Advanced Creative Writing Seminar
Projects in poetry, fiction, nonfiction, and playwriting. Course will focus on one genre.
3 Cr. DEMAND

ENGL 647 Issues in Writing Center Administration
Administering a writing center for E-12 schools, 2-year colleges or 4-year universities, including funding, budget, technology, record-keeping, and assessment.
Prereq.: ENGL 654 3 Cr. DEMAND

Student Learning Outcomes
1. Identify sources of funding for writing centers 2. Create and analyze budgets that meet institutional missions 3. Develop record-keeping systems 4. Analyze and identify data for reporting, assessment, and funding purposes 5. Analyze contexts and audiences for documents associated with writing center administration 6. Develop leadership and supervisory skills

ENGL 648 Writing Center Staffing and Training
Developing position descriptions; hiring consultants; professional development; and designing modules for seminar, on-the-job, and semester-length training. Explore various delivery options.
Prereq.: ENGL 654 2 Cr. Summer

Student Learning Outcomes
1. Identify and analyze hiring needs 2. Analyze and implement hiring and interviewing procedures 3. Identify and develop position descriptions and marketing strategies 4. Design syllabi and training modules for writing center staff

ENGL 649 Writing Center Case Studies
Case studies exploring problem-solving contexts including, but not limited to, technology decisions, space issues, policies and procedures, diversity issues, and relationships with faculty and administration.
Prereq.: ENGL 654 2 Cr. Summer

Student Learning Outcomes
1. Evaluate rhetorical exigencies and constraints in writing center scenarios 2. Identify stakeholders in writing center contexts 3. Determine possible strategies for problem-solving or improvement in specific contexts 4. Identify, analyze, and create policies and procedures to address problems in staff and client management

ENGL 650 Topics in Teaching English
Seminar in teaching English/Language Arts. Topics might include current research in teaching English/Language Arts, professional writing for educators, creative writing pedagogy, issues in teaching English in grades 5-12. May be repeated to a max. of 6 credits.
3 Cr. DEMAND

ENGL 652 Digital Rhetoric and Pedagogy
Theoretical and practical issues using technology in English and composition classrooms. A wide range of multimodal pedagogy and applications appropriate to English and discourse studies.
3 Cr. Spring

ENGL 653 Supervised Tutoring
Ongoing training in tutoring in a writing center. Limited to writing center graduate assistants and required every semester they tutor. May be repeated to a max. 6 credits.
1 Cr. Fall | Spring

ENGL 654 Writing Center Theory and Practice
Primary texts in writing center scholarship; intersections between composition and writing center theory; writing processes and critical intervention; academic culture and literacies; diversity and politics of literacy education. Required of all graduate assistants in English assigned to tutor in the writing center.
3 Cr. Fall

ENGL 655 Supervised Teaching
Ongoing training in teaching college writing. Limited to teaching assistants and required every semester they teach, to a max. of 4 credits.
1 Cr. Fall | Spring

ENGL 656 College Composition Theories and Practices
A survey of significant approaches to the teaching of college composition; analysis of theoretical perspectives and pedagogical materials and methods in rhetoric and composition. Required for all teaching assistants in the first-year writing program.
3 Cr. Fall

ENGL 661 Theories in Second Language Acquisition
Interlanguage, nativist, environmentalist, and interactionist theories. Also contrastive, error, performance, discourse analyses, and research methodology.
3 Cr. Fall

ENGL 662 Seminar in TESL Methods
TESL and TEFL teaching methods for K-12, college, adult education classrooms. Methods to teach listening, speaking, reading, and writing and methods to integrate these four skills with grammar, pronunciation, and vocabulary.
3 Cr. Fall | Spring

ENGL 663 Phonetics and Phonology

Articulatory phonetics, the phonetic alphabet, the phonological rules of English. Exercises in varieties of English and other languages will be featured.
3 Cr. Fall

ENGL 664 Pedagogical Grammar for ESL Teachers
Descriptive and pedagogical English grammar, focusing on grammatical structures that cause difficulties for ESL learners and incorporating the teaching of grammar into the ESL classroom.
3 Cr. Spring

ENGL 665 TESL Practicum
Practical preparation for TESL teaching assignments in grammar, listening/speaking, reading, writing, or cultural orientation classes. Lesson preparation and assessment/evaluation. Required for all teaching assistants up to four credits.
Prereq.: ENGL 561, ENGL 562 1 Cr. Fall | Spring | Summer

ENGL 666 Seminar in Sociolinguistics
International and intercultural issues of language, such as world English, multilingualism, pidgins and creoles, language policy, planning, education, language and social class, ethnicity, and gender.
3 Cr. Fall

ENGL 667 Assessment, Evaluation, and Testing in TESL
Introduction to test design, development, and administration for English as a second/foreign language. Focus on speaking, reading, writing, listening, grammar, and vocabulary.
3 Cr. Fall

ENGL 668 Seminar in Classroom Based Research in TESL
Reading, interpreting, and implementing classroom based research in applied linguistics or TESL.
Prereq.: ENGL 661, ENGL 662 3 Cr. Spring

ENGL 669 Topics Seminar in TESL Theory and Practice
Critical review of research in TESL and language acquisition. Sample topics: first and second language acquisition, language assessment, error analysis, discourse analysis, and TESL methods and materials. May be repeated for a maximum of 6 credits with consent of instructor and graduate adviser.
3 Cr. DEMAND

ENGL 670 Seminar in Vocabulary Acquisition in Second Language
Explores major issues in second language vocabulary acquisition. Emphasis on practical application of research findings in teaching and developing instructional materials.
3 Cr. Spring

ENGL 671 Seminar in Child Bilingualism
Current theories in simultaneous and successive child bilingualism, cognition, emotional adjustment, and creativity. The role of social and historical factors in the outcomes of bilingualism.
3 Cr. Spring

ENGL 673 Seminar in ESL and Culture
Advanced preparation of TESL teachers for the multicultural experience of the ESL classroom with perspectives from Anthropology and Education, bilingual education, critical theory, sociocultural theory, and Sociolinguistics.
Prereq.: ENGL 662 3 Cr. DEMAND

ENGL 684 Internship in Teaching College English: Literature
Team-teaching of literature with an experienced teacher. The faculty member serves as supervisor and determines internship qualifications and requirements. Admission by consent of supervisor and director of English graduate studies. May be repeated to a max. of 3 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ENGL 690 Starred Papers
Independent, guided study for the completion of starred papers (Plan B).
3 Cr. Fall | Spring | Summer

ENGL 693 Specialized Projects in College Writing Pedagogy
Supervised experience on a project related to first-year composition or the departmental writing center, such as assessment, administration, or revision of institutional writing programs and services. May be repeated to a maximum of six credits.
Prereq.: ENGL 654, ENGL 656 Coreq.: 1-6 Cr. DEMAND

ENGL 695 Portfolio
Independent, guided study for the completion of the portfolio (Plan C, Rhetoric and Writing Emphasis).
3 Cr. Fall | Spring | Summer

ENGL 696 Internship in Teaching English in Community and Technical Colleges
Practical experience in team-teaching English in a community or technical college. Supervision by SCSU English faculty member and mentoring relationship with a college teacher. Admission individually arranged by consent of internship supervisor and director of English graduate studies. May be repeated to a max. of 3 credits.
Coreq.: 1-3 Cr. DEMAND

ENGL 697 Professional Communication Internship
Directed field experience in a professional environment requiring the research, writing, editing, and analytical technology skills of a graduate English student. Permission of director of English graduate studies and department chairperson. May be repeated to a max. of 6 credits.
Coreq.: 1-6 Cr. DEMAND

ENGL 698 Creative Work

Coreq.: 1-6 Cr. Fall | Spring | Summer

ENGL 699 Master's Thesis

Coreq.: 1-6 Cr. Fall | Spring

Environmental and Technolgical Studies (ETS)

ETS 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETS 505 Foundational Technical Developments
The universal characteristics of technology, its foundational technical developments, and their effects upon culture. Tools, materials, processes, systems.
3 Cr. DEMAND

ETS 513 Workshop: CAD Practices
Computer-aided Design. Solid modeling design software. 3D graphics model development and virtual prototyping.
3 Cr.

ETS 514 Selected Readings in ETS
Special environmental and/or technological topics or issues. May be repeated to a maximum of 3 credits.
Coreq.: 1-3 Cr. DEMAND

ETS 535 Concrete and Masonry Academy Workshop
Masonry and concrete construction. Classroom, tours, and hands-on activities.
3 Cr. Summer

ETS 536 Construction Scheduling and Estimating
Preliminary, detail, and quantity estimating and scheduling techniques for residential and small commercial projects.
3 Cr. Spring

ETS 544 Internship
Offered only to students who hold internships with industrial organizations for which advanced approval has been given by the department. May be repeated; however, a maximum of 9 credits will count toward an undergraduate degree and 4 credits toward a graduate degree.
Coreq.: 1-9 Cr. DEMAND

ETS 551 Workshop: Technology Education Activities
Developing activities for the secondary education technology educator.
Coreq.: 1-3 Cr. DEMAND

ETS 558 Workshop: Modular Technology I
Modular Technology laboratory systems to develop higher level thinking skills (synthesis/evaluation) in relationship to various technologies in the areas of Communication, Construction, Manufacturing, Transportation and BioTechnology. Testing and assessment of modular units.
2 Cr. DEMAND

ETS 559 Workshop: Modular Technology II
New educational technology systems available for middle and high school technology education classrooms including such modules as Robotics, Electronics, Graphic Design, Animation, Auto Exploration, Air Track, Satellite Communications, Weather Satellite, Virtual Reality, etc. Testing and Assessment of Modular Units.
2 Cr. DEMAND

ETS 560 Standards for Technology Education
Standards at the local, state, and national levels and how the standards are integrated and the impacts on technology education.
3 Cr. Summer

ETS 563 Environmental Toxicology

Fate and flow of environmental contaminants and stressors which affect populations including pesticides, heavy metals, organic pollutants, and physiochemical factors. The effects of toxicants at the individual, population, community, and ecosystem levels.
Prereq.: CHEM 140, CHEM 160, ETS 260 3 Cr. Spring

ETS 565 Wetland Environments
Wetland types, definitions, and formation. Wetlands identification and delineation. Human-wetland interactions.
Prereq.: ETS 260, ETS 262 3 Cr. Fall

ETS 567 Soils and Environmental Quality
Chemical, physical and biological principles of soils. Influences of soil on biogeochemical cycling of nitrogen, phosphorus, sulfur and trace elements. Management of polluted soils.
Prereq.: ETS 260, ETS 262 3 Cr. Spring

ETS 568 Waste Management Systems
Characteristics and design of waste management systems. Environmental, financial, and societal implications of waste management.
Prereq.: ETS 260 3 Cr. Spring

ETS 569 Environmental Systems Modeling
A landscape approach to the dynamics of environmental systems. Graphical modeling of the hydrology of stream flow, water quality, and wetland restoration in an agricultural watershed.
Prereq.: ETS 260 3 Cr. Spring

ETS 582 Renewable/Nondepletable Energy
Evaluation of energy resources including environmental, social, political, and economic considerations; synthesis and evaluation of renewable resource potential/rationale.
3 Cr. Fall

ETS 585 Transportation Academy Workshop
Systems, modes and impacts of transportation in society. Tours of transportation facilities in land, air, space and marine transportation systems. Creating transportation activities for classroom use.
3 Cr. Summer

ETS 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETS 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETS 601 Technology, Environment and Society
Effects of technology on the environment and society.
3 Cr. DEMAND

ETS 604 Innovations and Contemporary Problems
Current technological innovations, issues and events and their interrelationship to contemporary problems that face today's society.
3 Cr. DEMAND

ETS 615 Seminar, Technical Problems in ETS
Technical study of issues in environmental and technological studies. Present developments, experimentation and technical reports related to environmental and technological issues.
3 Cr. DEMAND

ETS 650 Contemporary Instructional Strategies in Technology Education
In-depth study and examination of innovative teaching strategies and their applications in technology education. Students identify, discuss, and apply selected strategies.
3 Cr. DEMAND

ETS 668 Current Literature and Research
Analysis of literature of the industrial field, with special attention to individual readings and reports, implications of such literature for current problems in industrial education.
3 Cr. DEMAND

ETS 673 Foundations of Technology Education
Contributors to development of technology education with special attention to economic, social and philosophical factors motivating this development.
3 Cr. DEMAND

ETS 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETS 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

ETS 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETS 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETS 699 Master's Thesis

Coreq.: 1-6 Cr. Fall | Spring

Ethnic Studies (ETHS)

ETHS 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETHS 505 Women of Color (same as GWS 505)
Examination of historical and contemporary issues facing American Indian, African American, Asian American, Latina, and immigrant women living primarily in the United States. The impact of race, gender, class, and other social inequalities on the lives of women of color will be discussed.
Prereq.: GWS 201, ETHS 201, ETHS 205, ETHS 210, ETHS 215, ETHS 220, ETHS 405 3 Cr. Fall

ETHS 508 Major Works in African American Studies
A multidisciplinary examination of landmark works in African American Studies addressing effects of institutional racism upon African Americans. Serves as the capstone course.
3 Cr. DEMAND

ETHS 525 Contemporary Asian Pacific American Issues
Diaspora and immigration; relations to other groups of color; anti-Asian movements; identities and representations; Model Minority Myth; activism; achievement/contributions of Asian Pacific Americans.
Prereq.: ETHS 201 or ETHS 215 3 Cr. Even Fall

Student Learning Outcomes
1. Discuss the diversity that exists among Asian Pacific American communities.
2. Analyze social policies, trends, laws, regulations, and issues affecting Asian Pacific Americans in the United States.
3. Apply a global perspective through comparative analyses of racial and ethnic issues across societies.
4. Identify Asian Pacific American contributions to U.S. society and world civilization.
5. Examine contemporary issues that Asian Pacific Americans are facing.

ETHS 570 The Black Community
Examination and analysis of contemporary issues facing Black American communities.
3 Cr. Spring

ETHS 572 Topics/Fieldwork in Asian Homelands or Diaspora Communities
Travel and field experience in Asian Homelands or Diaspora Communities. May be repeated with different nations to max of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate knowledge of international affairs and expanded appreciation for alternative worldviews.
2. Evaluate race, ethnicity, class, and gender from a transnational perspective.
3. Examine Asian ethnicity in Asian homelands, most especially with respect to the Asian American communities of the United States.
4. Analyze the historical, economic, sociocultural, and political impacts of colonialism and Westernization in Asia.
5. Demonstrate enhanced knowledge of personal heritage acquired through visits to ancestral homelands for Asian American students.

ETHS 575 Latina/o Communities
Issues in community development for Latinas and Latinos in the United States--focusing on the

Midwest--with special emphasis on gender, neighborhoods, grassroots community organizations, local history, and political participation.
3 Cr.

ETHS 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETHS 590 Native Studies Summer Workshop for Educators
Awareness, sensitivity and knowledge of American Indian histories, cultures, and languages in classrooms and other educational settings.
Coreq.: 2-3 Cr. Summer

ETHS 599 Independent Study
Offered at the discretion of departments, this program is intended for the very able, motivated student whose intellectual needs are partially served by serious independent study. Permission of instructor required. May be repeated.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETHS 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETHS 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETHS 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

ETHS 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETHS 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ETHS 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Film Studies (FS)

FS 501 Credit by Arrangement
Credit by arrangement.
Coreq.: 1-3 Cr. DEMAND

FS 551 Film History I
First few decades of the motion picture from its 19th century origins to its development into a worldwide cultural force by the end of the 1930s.
3 Cr. DEMAND

FS 552 Film History II
Evolution of the motion picture from 1940 to 1970 with emphasis on seminal aesthetic movements.
3 Cr. DEMAND

FS 564 Advanced Studies in Film
Selected topics such as film criticism, genres, censorship, politics, teen films, melodrama, and women in cinema. May be repeated, without repetition of content, to a maximum of 12 credits.
3 Cr. Fall | Spring

FS 588 Type B Workshop
Specific subjects selected to meet special educational needs, offered in a format different from the typical scheduled course. Exact nature of the course will be defined by the department.
Coreq.: 1-3 Cr. DEMAND

FS 596 Film Theory
Major theories of cinema. The chief schools of thought from early formalism to contemporary post-modernism. Successful completion of this course will fulfill the Upper Division Writing Requirement for

Film Majors. Permission of instructor.
3 Cr. Fall

FS 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

FS 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

Finance, Insurance & Real Estate (FIRE)

FIRE 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

FIRE 527 International Accounting and Finance
On the basis of the analysis of annual reports, students will be given an overview of the differences existing in financial reporting systems in foreign countries. Insight into the state-of-the-art techniques in risk adjusted capital budgeting.
Prereq.: ACCT 291, ACCT 292, FIRE 371 3 Cr. Fall | Spring

FIRE 571 Corporate Financial Policies
Corporate financial decision making; adjustments to changing conditions; market structure and corporate capital instruments; capital market movements and financial decisions.
Prereq.: FIRE 371 3 Cr. Fall | Spring | Summer

FIRE 572 Financial Institutions
Role in the economy; current issues/controversies in banking and intermediation; international aspects of financial intermediation.
3 Cr. Fall | Spring | Summer

FIRE 573 International Finance
Foreign exchange, currency and derivative markets, currency risk management, international investment and financing decisions, multinational corporate financial decisions.
Prereq.: FIRE 371 3 Cr. Fall

FIRE 574 Security Analysis
Organization of securities markets, risk and return analysis, modern portfolio theory, efficient market theory, fixed income securities, equity securities, and derivative securities.
Prereq.: FIRE 371, FIRE 373 3 Cr.

FIRE 575 Life and Health Insurance
Individual life and health insurance and employee benefits; estate and financial planning; insurance company management and operations; regulation; public policy issues.
3 Cr. Fall

FIRE 576 Property and Liability Insurance
Property and liability risks; contracts, insurance law and regulation; company management and operations.
3 Cr. Spring

FIRE 577 Managerial Finance
Basic concepts in finance: time value of money, financial ratio analysis, and security valuation. Corporate financial decisions: capital budgeting, choice of capital structure, and working capital management.
3 Cr. Spring

FIRE 579 Social Insurance
Economic security; public and worker's compensation programs designed to alleviate the perils of premature death, poor health, retirement, unemployment, and poverty. Program structure, financing, and policy.
3 Cr. Fall

FIRE 580 Employee Benefits and Group Insurance
Employee benefit plan design, group insurance contract provisions, group life and health coverage, pension plans, cost containment, and taxation.
3 Cr. Spring

FIRE 581 Financial Derivatives
Characteristics and functions of financial derivatives. Corporate risk management applications of financial derivatives. Pricing models of derivatives and trading strategies using derivatives to hedge financial risks.
Prereq.: FIRE 371, FIRE 471 3 Cr. Fall

FIRE 583 Real Estate Finance and Investments
Cash flows generated by commercial investment real property, from both the lender's and investor's viewpoint. Ratio and return analysis. Primary and

secondary mortgage markets.
Prereq.: FIRE 378 3 Cr. Fall

FIRE 584 Real Estate Appraisal
Cost, income, and market approaches to value of real property assets. Professional narrative appraisal employing comparable sales analysis, depreciated cost analysis and discounted cash flow analysis. Professional ethics and uniform standards of professional appraisal practice.
Prereq.: FIRE 378 3 Cr. Spring

FIRE 587 Management of Financial Institutions
Decision making in commercial banks and other depository institutions. Asset, liability, and capital management issues. Lending, depository, and trust functions.
Prereq.: FIRE 371 3 Cr. Spring

FIRE 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

FIRE 590 Topics in Finance, Insurance and Real Estate
Cases and/or student research, class involvement. Options and futures, mergers and acquisitions, health care finance, real estate brokerage, capital investment decisions, and emerging issues.
Coreq.: 1-3 Cr. DEMAND

FIRE 598 Business Consulting
Teams of students work as consultants to area businesses and non-profit organizations to diagnose and solve actual business problems. Written and oral report required.
Prereq.: FIRE 371 and MKTG 220 and ACCT 292 and MGMT 201 and IS 242 or STAT 242, or permission of department. 3 Cr. Fall | Spring

FIRE 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

FIRE 605 Business Seminar
Selected topics related to (1) finance; or (2) insurance and real estate.
3 Cr. DEMAND

FIRE 672 Reading in Finance
Special readings in the subject area.
3 Cr. DEMAND

FIRE 675 Readings in Insurance and Real Estate
Special readings in the subject area.
3 Cr. DEMAND

FIRE 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

FIRE 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

FIRE 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

FIRE 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

FIRE 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Foreign Languages and Cultures (FORL)

French (FREN)

FREN 521 Advanced Studies in French Civilization
Intensive study of an aspect of the historical, sociological, artistic, political and intellectural development of the French-speaking peoples. May

be repeated to a max. of 6 credits.
Prereq.: FREN 302, FREN 331 3 Cr. Spring

FREN 554 Teaching French in the Secondary School
Taken concurrently with student teaching. Application of language learning principles in secondary schools. Selection and presentation of daily and unit lessons. Critique based on the theories discussed in FORL 453 BS Capstone course; cannot be used as an elective in BA program.
Prereq.: FORL 453 2 Cr. Fall | Spring

FREN 556 Teaching French in the Elementary School
Application of language learning principles to elementary school instruction. Development/selection of materials and practice in presenting them. BS capstone course: cannot be used as an elective in BA program.
Prereq.: FORL 455/555 2 Cr. DEMAND

FREN 560 Study Abroad
Capstone required course for participants in the study abroad program. On-site study of selected aspects of language and/or culture in the host country. Final oral and written report presented in French. Topics determined in consultation with study abroad director.
3 Cr. Spring

FREN 561 Internship
Use of linguistic ability in a work setting in the US or in a French-speaking country. Combines learning with an apprenticeship experience. Completion of an internship report under the guidance of instructor. May substitute for 457.
2 Cr. Fall | Spring | Summer

Geography and Planning (GEOG)

GEOG 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GEOG 506 Thematic Cartography
Statistical mapping of spatial data, advanced manual and computer techniques. Topical.
Prereq.: GEOG 316 or consent of instructor 3 Cr. Fall

GEOG 507 Map Design and Presentation
Advanced color desktop computer mapping techniques, such as multimedia and web-based cartography. Topical.
Prereq.: GEOG 506 3 Cr. Spring

GEOG 516 Techniques in GIS
Standard techniques in geographic information systems. Topical.
Prereq.: GEOG 316 or consent of instructor 3 Cr. Spring

GEOG 550 Digital Image Processing
Characteristics and qualities of nonconventional remote sensing imagery as it applies to inventory and assessment of environmental phenomena. Topical.
Prereq.: GEOG 350 or consent of instructor 3 Cr. Spring

GEOG 554 Regional Planning
Comparative regional planning. Economic distribution and ideological differences. Topical.
3 Cr. DEMAND

GEOG 562 Concepts in Spatial Analysis
Spatial, network and surface analysis. Topical.
Prereq.: GEOG 416/516 3 Cr. Fall

GEOG 571 Historical Geography
Historical-geographical development of North America through concepts of modernity and modernization; imperialism and colonialism; race, class and gender; science and exploration; migration and settlement; industrialization, urbanization, and the modern capitalist state. Topical.
3 Cr. DEMAND

GEOG 572 Geomorphology
The configuration of the earth's surface and physical processes that have brought the surface to its present condition. Topical.
3 Cr. Fall

GEOG 573 Biogeography
Spatial distribution of species and communities, their relations with the environment, historical changes, and conservation. Topical.
3 Cr. Spring

GEOG 574 Topics in Physical Geography
Selected contemporary issues in physical geography. May be repeated with different subjects to a maximum of 6 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Analyze critically and apply knowledge of the complex, contemporary issues in physical geography, e.g., advanced Quaternary studies in biogeography or modification of natural environments in Minnesota.
2. Apply first-hand experience with contemporary methods of physical geography research, e.g., microscopy of microfossils, creation and interpretation of field vegetation surveys, GIS integration of park resources, or direct field measurements of plant growth.
3. Apply their theoretical knowledge to the construction of synthesis recommendations.

GEOG 576 Topics in GIS

Coreq.: Cr.

GEOG 578 Topics in Human Geography

Coreq.: Cr.

GEOG 586 Political Geography
Geographic concepts applied to the analysis of political organization and behavior.
3 Cr. DEMAND

GEOG 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GEOG 592 Water Resources
Major problems in the development and management of water resources: supply, distribution, quality, pollution, floods and variability; case-studies in selected regions.
3 Cr. DEMAND

GEOG 593 Gender, Space and Society: Global Perspectives
Relationships among gender, geography and society at seven key scales--the body, home, workplace, the environment, city, nation and the global.
3 Cr. DEMAND

Student Learning Outcomes
1. Demonstrate communication and research skills.
2. Understand and will be familiar with feminist theory.
3. Understand and will be familiar with feminist research methods.
4. Understand the importance of geography to the understanding of society.
5. Explain how gender matters cross-culturally so they will understand importance of gender relations and how gender differ globally; how gender is lived in societies of the Global North and South in the context of development, social change, migration, resource use and work; how gendered lives are brought together geographically through militarism citizenship processes, capitalist economies, discourses ane practices of development, tourism, and environmental use, degradation and protection.

GEOG 596 Tourism and the Environment
Tourism and its relationship to the physical and cultural character of place. Sustainable development, particularly when expressed as eco-tourism.
3 Cr. DEMAND

GEOG 597 Tourism Planning and Policy
Advanced planning principles and policy formulation frameworks/strategies applicable to tourism development at different scales--site, destination and regional. Case studies of applied tourism planning and policies in different countries.
Prereq.: GEOG 290 3 Cr. Spring

GEOG 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GEOG 601 Research in Geography
A seminar or conference course. Credits and meetings by arrangement. May be repeated to a max. of 6 credits.
Coreq.: 1-6 Cr. Fall

GEOG 602 Reading in Geography
A seminar or conference course to investigate the geography of a particular region of the world or application of geographic technique. Credits and

meetings by arrangement. May be repeated to a max. of 6 credits.
Coreq.: 1-6 Cr. Spring

GEOG 605 Spatial Analysis Methods in Geography
Statistical analysis of spatial variations, digital maps in spatial analysis, integration of statistical and GIS software.
3 Cr. DEMAND

GEOG 610 Research Process in Geography
Development of research prospectus, contemporary issues, systems approach, fundamental process and methods in geographic research.
3 Cr. DEMAND

GEOG 630 Seminar
Research and seminar presentation on a selected geographic topic. Regional or topical.
Coreq.: 1-3 Cr. DEMAND

GEOG 644 Internship: Practical Geography
Requires consent of the department and is limited to graduate students only.
Coreq.: 1-6 Cr. DEMAND

GEOG 650 Land Use Analysis: Examination of the Nature, Use, and Conservation/Land
Land use planning techniques. Permission of instructor. Topical.
3 Cr. DEMAND

GEOG 654 Urban, Regional and Resource Planning
Concepts, philosophies, and theories of planning; case-studies.
3 Cr. DEMAND

GEOG 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GEOG 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

GEOG 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GEOG 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GEOG 699 Master's Thesis

Coreq.: 1-6 Cr. DEMAND

Gender and Women's Studies (GWS)

GWS 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GWS 505 Women of Color in the U.S. (same as ETHS 505)
Examination of historical and contemporary issues facing American Indian, African American, Asian American, Latina, and immigrant women living primarily in the United States. The impact of race, gender, class, and other social inequalities on the lives of women of color will be discussed.
3 Cr. Fall

GWS 506 Sexual Assault Advocacy Training
Advocacy skills for sexual assault survivors including: understanding the impact of sexual assault on survivors, the social and cultural context in which sexual assault occurs, and the roles the legal system, law enforcement, social services and medical services play with survivors.
Prereq.: GWS 201 or HURL 201 3 Cr. Fall | Summer

GWS 515 Feminist Theory
Feminist theories and their application to understanding women's lives and social institutions.
3 Cr. Spring

GWS 588 Type B Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the

petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GWS 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GWS 630 Topics in Social Responsibility
Selected topics and issues in the study and practice of social responsibility. Specific titles to be listed in class schedule. May be repeated under different topics to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

GWS 645 Feminist Scholarship and the Construction of Knowledge
Will explore recent works of feminist scholarship with special emphasis on how taking women into account has impacted scholarship (research methods and knowledge base) in a number of disciplines.
Prereq.: GWS 525 3 Cr. DEMAND

GWS 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GWS 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

GWS 695 Temporary Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GWS 699 Thesis
Thesis
Coreq.: 1-6 Cr. Fall | Spring | Summer

German (GER)

GER 518 Ethnic and Social Minorities in German-Speaking Countries
Study of ethnic minorities in German speaking countries.
3 Cr. DEMAND

GER 554 Teaching German in the Secondary School
Taken concurrently with student teaching. Application of language learning principles in secondary schools. Selection and presentation of daily and unit lessons. Critique based on the theories discussed in FORL 453. BS capstone course. Cannot be used as an elective in BA program.
Prereq.: FORL 453 2 Cr. Fall | Spring

GER 556 Teaching German in the Elementary School
Application of language learning principles to elementary school instruction. Development/selection of materials and practice in presenting them. BS capstone course; cannot be used as an elective in BA program.
Prereq.: FORL 455-555 2 Cr. DEMAND

GER 560 Study Abroad
Required capstone course for participants in study abroad program. Requires study abroad during a semester, a thesis and public presentation of arguments made in the thesis. Topics determined in consultation with study abroad director.
3 Cr. Spring

GER 561 Internship
Use of linguistic ability in a work setting in the U.S. or in a German-speaking country. Combines learning with an internship experience. Completion of an internship report under guidance of instructor. May substitute for 457.
2 Cr. DEMAND

GER 571 Business German
Legal system; business administration; job market; banking, manufacturing, and service industries; real estate.
Prereq.: GER 302 Coreq.: 2-4 Cr.

Gerontology (GERO)

GERO 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GERO 505 Aging and Diversity

The intersection of factors such as gender, race, ethnicity, culture, class, sexual orientation, geographic location, physical ability with aging.
3 Cr. Fall

GERO 511 Aging Policy and Programs
The federal, state and local framework of services and programs for the aging.
3 Cr. Fall

GERO 515 Women and Aging
Position of older women in society and issues that are unique to women as they age.
3 Cr. Spring

GERO 525 Dementia and Aging
The nature, causes and treatment of dementia in later life, including concerns for family, caregiving and community practice.
3 Cr. Fall

GERO 530 Elder Law
Issues facing advocates and their clients regarding elder law. Elder rights and public policy and the role of society.
3 Cr. DEMAND

GERO 535 Housing, Transportation & Aging
Housing and transportation needs of older persons and housing options available to them. Issues of working with older persons in a variety of housing settings.
3 Cr. Spring

GERO 540 Seminar
Analysis of issues or topics in the field of aging. A specific topic will be selected each time the course is offered. May be repeated.
Coreq.: 1-3 Cr. DEMAND

GERO 565 Health and Aging
Physiological and cognitive processes of human aging within context of environmental, societal and lifestyle factors which promote healthy aging.
Prereq.: GERO 208 or permission of instructor. 3 Cr. Spring

GERO 570 Global Aging
Aging as a global phenomenon. Demographic trends, historical influences and lived experience. Focus on intersection of gender, ethnicity, geography, and class.
3 Cr. DEMAND

GERO 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GERO 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GERO 620 Advanced Policy Issues in Gerontology
An in-depth exploration of key concepts and major issues in the field of aging. Students formulate positions on each major issue, based on lectures, readings, discussions.
3 Cr. Spring

GERO 630 Aging and Community: Current Issues in Social Gero, Culture and Diversity
Aging in the U.S. and globally. Interpersonal and instrumental concerns related to aging in different communities.
3 Cr. Fall

GERO 644 Gerontology Internship
Supervised field experience in an agency, program, business or institution working with or on behalf of older adults. Arranged by contract between site supervisor, faculty supervisor and student.
Coreq.: 3-12 Cr. Fall | Spring

GERO 650 Research Methods and Design in Gerontology
Qualitative, quantitative, mixed methods and theoretical perspectives. Critique and analysis of current research in Gerontology. Research design and implementation.
3 Cr. Fall

GERO 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GERO 691 Enrollment Continuation

Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

GERO 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GERO 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

GERO 696 Practicum (Plan C Option)
Internship, portfolio and final oral examination. Consent of adviser.
6 Cr. Fall | Spring

GERO 697 Starred Paper (Plan B) Preparation

Coreq.: 1-6 Cr. Fall | Spring

GERO 699 Thesis

Coreq.: 1-6 Cr. Fall | Spring

GERO 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

GERO 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

GERO 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

GERO 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

GERO 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

GERO 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

Health (HLTH)

HLTH 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HLTH 511 Nutrition: Older Adult
Nutritional status and needs of the older adult. Common nutritional problems of the elderly. Overview of the programs designed to serve the health and nutrition needs of the older adult.
Prereq.: HLTH 210 3 Cr. DEMAND

HLTH 512 Advanced Nutrition
Current topics in nutrition, relationship of nutrition to physical performance; methods of nutritional assessment; and complex nutrient needs.
Prereq.: HLTH 210 3 Cr. DEMAND

Student Learning Outcomes
1. Describe the scientific method and different research methodologies.
2. Describe the cell: microcosm of life.
3. Describe the digestive system and its relation with nutrition.
4. Describe the structural/functional characteristics of carbohydrates, fats, proteins, vitamins, and minerals.
5. Describe the oxidative and phosphorylation process.
6. Describe the metabolic pathways for carbohydrates, fats, proteins, and vitamins.
7. Describe the importance of macro/micro minerals and water for the normal functioning of the body.
8. Provide clinical applications of the metabolic process of nutrients and minerals in the body.
9. Describe the impact of proper nutrition on exercise, sport, and body composition.

HLTH 515 Health Education Curriculum Development
Organization and development of a school health curriculum, K-12; techniques for course of study construction.
Prereq.: HLTH 210, HLTH 215, HLTH 301, HLTH 315, HLTH 481 - HLTH 581. 3 Cr. Fall

HLTH 530 Seminar: Topical
Discussion, literature search, research in selected, contemporary topics-developments in community

health, health education, and safety such as AIDS, chemical abuse, consumerism, environmentalism, accidents, and health care delivery. May be repeated topically.
Coreq.: 1-3 Cr. Fall | Spring

HLTH 581 Human Sexuality
Biological, psychological, behavioral, and cultural aspects of sexuality.
Prereq.: Previous coursework in personal health and anatomy or permission of instructor. 3 Cr. DEMAND

HLTH 582 Environmental Health
Physical, chemical, and biological agents of environmental contamination. Body's reaction to environmental and occupational pollutants; policy decisions; emerging global environmental health problems.
Prereq.: Previous coursework in nutrition, personal health and public health or permission of instructor. 3 Cr. DEMAND

HLTH 584 Health Promotion
Develop and implement health promotion and behavioral science interventions, use varied strategies for target audiences.
Prereq.: Previous coursework in personal health, public health, and theories of health education and promotion or permission of instructor. 3 Cr. DEMAND

Student Learning Outcomes
1. Identify basic theories, concepts and models from a range of social and behavioral disciplines that are used in public health research and practice.
2. Analyze settings and target audiences for health education and health promotion.
3. Conduct needs assessment and plan health promotion programs.
4. Plan, implement and evaluate health promotion programs, policies and interventions.
5. Assess community collaborations required to successfully deliver a health promotion intervention.
6. Determine a professional philosophy of health promotion/education.
7. Identify strategies that incorporate multicultural competence within health promotion initiatives.

HLTH 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HLTH 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HLTH 625 Supervision of the School Health Program
History, legal requirements, budget, scheduling, coordination, public relations, and philosophy as each of these relates to the School Health Program. 3 Cr. DEMAND

HLTH 630 Seminar in School Health Education
Lectures, readings, research and discussion on selected current topics in health education. May be repeated with different topics to a maximum of 6 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HLTH 632 Survey of Recent Research in the Field of Health
Reading and discussion of recent studies and authentic reports in various areas of health.
3 Cr. DEMAND

HLTH 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HLTH 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

HLTH 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HLTH 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are

intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HLTH 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Herberger Business School (HBS)

HBS 579 Special Topics in Global Business
Special topics in the global business environment. May include information systems, marketing, management, accounting, finance, law, and related topics. May be repeated up to 6 credits with different topics.
3 Cr. DEMAND

History (HIST)

HIST 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIST 502 The Middle East
The rise and development of medieval Islamic Civilizations; the Middle East under the Ottomans; the recent age.
3 Cr. Even Spring

HIST 503 Medieval Europe, 325-1500
Political, economic and cultural history of Europe from the later Roman Empire to the end of the fifteenth century.
3 Cr. Odd Fall

HIST 504 The Renaissance, 1300-1500
Growth of the secular spirit and state; rise of humanism; social and economic forces; beginnings of European expansion; the dawn of modern science.
3 Cr. Fall

HIST 505 The Reformation, 1500-1648
Protestant and Catholic Reformations; religious wars, rise of the modern state, modern culture and capitalism.
3 Cr. Spring

HIST 508 Europe and World War I
Origins of World War I; the war and peace settlement; Russian Revolution; post-war problems; origins and rise of Fascism and Nazism.
3 Cr. Even Fall

HIST 509 Europe and World War II
Causes of World War II; the war and post-war problems; adjustments which have created contemporary Europe.
3 Cr. Even Spring

HIST 511 The Holocaust
The history and implications of the Nazi genocide; historiographical issues.
3 Cr. DEMAND

HIST 518 History of Social Welfare in the U.S.
Survey and analysis of the development of social welfare concerns in the U.S. as they have been shaped by a combination of social, political, and economic factors.
3 Cr. DEMAND

HIST 520 Colonial North America
Cultural, political, military, economic, and social experiences.
3 Cr. DEMAND

HIST 521 Revolutionary American, 1763-1791
Revolutionary era society, the American Revolution, the War for Independence, and the development of self-rule through the adoption of the Bill of Rights.
3 Cr. Spring

HIST 522 Launching A Nation: America 1792-1848
Territorial expansion, reform, social change, economic development and growth of political democracy from the Federalist Era to the Mexican-American War.
3 Cr. Fall

HIST 523 Civil War and Reconstruction U.S. 1848-1877
Sectionalism, disunion and war, the Confederacy, reunion and reaction.
3 Cr. DEMAND

HIST 525 Reform, War and Change: U.S. 1890-1945
Social, economic, cultural, and political trends, issues, and change, including progressivism, depression, war, urbanization.
3 Cr. DEMAND

HIST 526 The Cold War and American Life
Impact of the Cold War on economic, political, and social development of the United States after World War II.
3 Cr. DEMAND

HIST 533 Russia, 1700-1917
Politics, diplomacy, society, economics, and culture from Peter the Great to the Revolution.
3 Cr. DEMAND

HIST 534 Soviet Russia Since 1917
Historical survey of politics, society, economics, and culture.
3 Cr. DEMAND

HIST 545 United States Military History
Military problems and accomplishments from 1775 to the present.
3 Cr. DEMAND

HIST 547 American Urban History
Urban America from colonial to modern times; the origin and growth of cities and their impact upon the development of the U.S. An elective for students in Community Development.
3 Cr. Spring

HIST 548 Culture, Conflict and Value in America
Puritanism, revivalism, American political thought, economic values, agrarianism, reform movements, literary traditions, individualism are among the discussed topics.
3 Cr. Fall

HIST 551 American Families
The family and its relationship to the individual and the community from pre-industrial British colonial America to the late twentieth century.
3 Cr. DEMAND

HIST 556 U.S. Foreign Relations from World War I
The U.S. as a world power; diplomatic policies in two world wars and their aftermath.
3 Cr. DEMAND

HIST 558 The American West
Topical and chronological consideration of western land policy, territorial government, Indian policy, economic development.
3 Cr. DEMAND

HIST 567 Modern Japan
Japanese history, 1800-present, emphasizing political developments, social and economic change, culture and intellectual achievements.
3 Cr. Fall

HIST 580 Seminar in American History
Intensive reading and research in one area or topic of U.S. or Latin American history. Limited to junior, senior or graduate students or permission of the instructor. May be repeated with different topics to a maximum of 9 credits.
3 Cr. DEMAND

HIST 583 Seminar in European History
Bibliographical study, research, and discussion of a selected topic. Limited to junior, senior or graduate students or permission of the instructor. May be repeated with different topic.
3 Cr. DEMAND

HIST 586 Seminar in Africa, Asia, or Middle East
Reading and research on a selected topic. Limited to junior, senior or graduate students or permission of the instructor. May be repeated with different topic to a maximum of 9 credits.
3 Cr. DEMAND

HIST 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIST 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIST 605 Reading in History (Topical)
Guided study of individual investigation of special historical topics and/or problems. Credits and meetings by arrangement. May be repeated with different topic to a max. of 9 credits.
Coreq.: 1-3 Cr. DEMAND

HIST 610 Historiography and Research Methods
Readings and discussions about historical analysis. Methodologies currently shaping historical research. Historiography and developments of historical theories during 19th and 20th centuries.
3 Cr. Fall

HIST 635 Readings in European History
Guided study through individual investigation of special periods and topics. May be repeated with different topic to max. of 9 credits.
Coreq.: 1-3 Cr. DEMAND

HIST 645 Readings in World or Regional History
Topics in world or regional history. May be repeated with different topic to a maximum of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Students are expected to be able to evaluate the principle approaches to world or regional history, areas of debate and controversy, and trends in scholarship.
2. Students are expected to be able to explain and analyze historiographical developments and trends for literature review.
3. Students are expected to be able to identify and critique theses of major works in world or regional history.
4. Students are expected to be able to construct historiographical arguments and analysis.

HIST 651 Reading in American History
Guided study of American history through individual investigation of special periods and topics. May be repeated with different topic to a max. of 9 credits.
Coreq.: 1-3 Cr. DEMAND

HIST 664 Seminar: European History
Bibliographical study, reading in documents and secondary works, analysis and discussion, research in selected topics or areas. May be repeated with different topics to a max. of 9 credits.
3 Cr. Fall | Spring | Summer

HIST 667 Seminar: World or Regional History
Bibliographical study, documents and secondary works, analysis, discussion, and research in selected topics or areas. May be repeated with different topics to a max. of 9 credits.
3 Cr. DEMAND

HIST 672 Public History: Theory and Practice I
Analysis and application of public history concepts; archival practices; exhibition research.
3 Cr. Fall

HIST 673 Public History: Theory and Practice II
Advanced public history theory and practice.
3 Cr. Spring

HIST 674 Community History
Theory of community studies and relevant methodological training, including oral history, genealogical study, archival work, collections strategies, and collaboration with community members.
3 Cr. Spring

HIST 675 Oral History
Theory and practice of oral history.
3 Cr. DEMAND

HIST 676 Archival Management
Development of collections, acquisition policies, preservation of documents, cataloging, ethics and privacy issues.
3 Cr. DEMAND

HIST 681 Seminar in American History
Intensive reading and research in one area or topic of U.S. or Latin American history. May be repeated with different topic to a max. of 9 credits.
3 Cr. Fall | Spring | Summer

HIST 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr.

HIST 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr.

HIST 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIST 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a students's approved

program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIST 696 Internship in Public History
Work for a full semester in a historical society, a history firm, or an equivalent situation to gain experience and work skills directly in a setting of public history.
Coreq.: 1-9 Cr. DEMAND

HIST 699 Thesis

Coreq.: 1-6 Cr. Fall | Spring

HIST 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HIST 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

HIST 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HIST 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr.

HIST 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HIST 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

Honors Program (HONS)

HONS 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HONS 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HONS 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr.

HONS 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HONS 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HONS 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HONS 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Higher Education Administration (HIED)

HIED 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIED 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIED 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIED 604 Introduction to Higher Education
Overview of the program and the field of higher education; career options; expectations of the program including the thesis, project/portfolio and practicum; and professional development plan.
3 Cr. Fall | Summer

HIED 614 Higher Education Leadership and Administration
Overview of the history of higher education, leadership theories, styles, models, functions, and skills. Academic, administrative, and student affairs governance and administration.
Prereq.: HIED 604 3 Cr. Fall

HIED 624 Legal and Ethical Asepcts of Higher Education
Legal, ethical, and social issues impacting academic, administrative, student affairs officials and other concerns to leaders of higher education institutions.
Prereq.: HIED 604 3 Cr. Summer

HIED 634 Human Resource Issues in Higher Education
Overview of personnel functions in higher education institutions, policies and procedures; selection, supervision, and termination; professional development; and employee-management relations. Faculty, staff, and student diversity and social justice issues.
Prereq.: HIED 604 3 Cr. Spring

HIED 644 Higher Education Finance
Overview of higher education finance. Creation of budgets; budget processes; types of costs; budget allocations; coding; and state and federal higher education funding.
Prereq.: HIED 604 3 Cr. Fall

HIED 654 University-Community Relations
Understanding of internal and external university/college community relations; working with the media; public relations communication vehicles; and written, verbal, and interpersonal communication skills.
Prereq.: HIED 604 3 Cr. Spring

HIED 664 Critical Issues Seminar in Higher Education
Current and critical issues impacting higher education leaders and institutions. May be repeated with a different topic to a maximum of 6 credits.
Prereq.: HIED 604 3 Cr. Fall | Spring | Summer

HIED 672 Practicum in Higher Education Administration
Structured and supervised administrative projects and activities at a cooperatively selected college/university.
Prereq.: HIED 604 3 Cr. Fall | Spring | Summer

HIED 674 Introduction to Research in HIED
Identification and evaluation of research in higher education administration; techniques and interpretation of research; problem definition; introduction to research design and reporting results; reviews of literature; preparation of a research plan.
Prereq.: HIED 604 3 Cr. Fall

HIED 684 Project/Portfolio
Complete and defend a theoretical or applied project/portfolio.
Prereq.: HIED 604 3 Cr. Fall | Spring

HIED 690 Selected Topics
May be repeated to a max. of 6 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIED 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

HIED 694 Research Methods and Design
Qualitative, quantitative, and mixed-method research approaches and designs; data collection and analysis; preparation of higher education administration thesis/project/portfolio proposal. Preparation for their preliminary oral exam.
Prereq.: HIED 604 3 Cr. Spring

HIED 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved

program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HIED 699 Thesis
Six credits required for degree.
Coreq.: 1-6 Cr. Fall | Spring | Summer

HIED 790 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HIED 791 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HIED 792 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HIED 793 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HIED 794 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HIED 795 Selected Topics
May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HIED 800 U.S. Higher Education
Historical perspective regarding the development of higher education in the United States. Global roots will be discussed, but the course will primarily focus on looking back to understand how and why higher education in the United States came to be what it is today.
3 Cr. Fall

HIED 801 College and University Leadership
Theoretical and practice-oriented aspects of higher education administration. Leadership in 4-year and 2-year institutions, including public, private, proprietary, and virtual colleges and universities will be explored.
3 Cr. Fall

HIED 803 Community Building
Purpose and function of university - community relations, alumni relations, foundation, and university advancement.
3 Cr. Spring

HIED 804 Diversity and Social Justice in Higher Education
Examination of theory, policy, and practice as it pertains to diversity and social justice in U.S. institutions of higher education.
3 Cr. Spring

HIED 805 Budgeting and Finance in Higher Education
Knowledge and skills regarding higher education budgeting and finance strategies, techniques, issues, and practices.
3 Cr.

HIED 806 Higher Education Law
Legal environment, and legal and ethical aspects of higher education institutions including legal processes, analysis, and problems faced by institutions, faculty, staff, and students.
3 Cr. Spring

HIED 807 Research Design in Higher Education
Foundation for research design, writing, argumentation, and report evaluation, including quantitative and qualitative research methods.
3 Cr. Fall

HIED 808 Quantitative Research Methods
Quantitative research including methods, design, statistics, measurement, databases, and computer software programs.
3 Cr. Spring

HIED 809 Qualitative Research Methods
Qualitative research, including methods and design, from a theoretical and practical perspective. Various computer software programs are also explored.
3 Cr. Spring

HIED 810 Organizational Theory in Higher Education Administration
Organization theory, including fundamental questions and approaches to the study of organizations. Key organizational processes will be explored, including decision making, problem solving, communication, and change.
3 Cr. Summer

HIED 812 Curriculum and the Academic Program in Higher Education

Curriculum perspectives, procedures, and practices in the higher education, including theory, planning, and design.
3 Cr. Summer

HIED 813 Advanced Issues in Academic Affairs
Current and critical topics/issues facing academic affairs administrators, giving students a greater understanding and in-depth view of the problems and opportunities associated with this division.
3 Cr. Fall

HIED 814 Governance and Policy Development in Higher Education
Analysis of higher education systems and governance including political, economic, and social influences that impact decision making and policy development at the institutional, local, state and federal levels.
3 Cr. Fall

HIED 820 The College Student
Historical and contemporary view of the college student.
3 Cr. Summer

HIED 821 College Student Development Theory
Student development and learning theories based on cognitive, psychological, typology, and person-environment perspectives.
3 Cr. Summer

HIED 822 Organization and Administration of Student Affairs
Organizational structures and functions of student affairs divisions on college and university campuses.
3 Cr. Summer

HIED 823 Advanced Issues in Student Affairs
Current and critical topics/issues facing student affairs administrators, giving students a greater understanding and in-depth view of the problems and opportunities associated with this division.
3 Cr. Fall

HIED 830 Planning and Change in Higher Education
Theories and research pertaining to change in higher education, including strategic planning, planning for change, multicultural organizational development, and strategies for implementing change.
3 Cr. Summer

HIED 880 Special Topics in Higher Education
Investigation of current and emerging issues, trends or theoretical perspectives in the field of higher education. Doctoral admission required.
3 Cr. DEMAND

HIED 890 Independent Study
Independent study for doctoral students wishing to work out a special problem in the major area of concentration. May be repeated to a maximum of six credits.
Coreq.: 1-6 Cr. Fall | Spring | Summer

HIED 891 Enrollment Continuation
Intended for doctoral students who have completed all required coursework for a program, but are still working on the dissertation or doctoral field study. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

HIED 899 Dissertation
Guidance by the major adviser for dissertation writing, including preparation of the proposal, preliminary presentation to the committee, and final oral presentation to the committee. 12 credits required for degree.
Coreq.: 1-9 Cr. DEMAND

Hospitality and Tourism

HTSM 515 Ethics in Hospitality and Tourism
Analysis of trends in Hospitality and Tourism toward ethical and sustainable management practices, including the formation and implementation of policy within the framework of ethical theory.
Coreq.: Cr.

Student Learning Outcomes

1. Understand the ethical principles of responsible tourism development practices and the policy making process.
2. Evaluate the development, application and implementation of ethical guidelines and policy to Tourism 3. Apply ethical theories and policies to various Hospitality and Tourism operations.

HTSM 525 Methods in Hospitality and Tourism Research
Foundations of research, research design, hypothesis testing, analysis of findings, reporting and ethical issues in Hospitality and Tourism.
Prereq.: Completion of HTSM 111 with a "C" grade or better. 3 Cr. Fall

Student Learning Outcomes
1. Explain how research supports the formation of policy, marketing strategies and practices in Hospitality and Tourism.
2. Describe the methods, theories and concepts common to Hospitality and Tourism research.
3. Evaluate empirical Hospitality and Tourism research published in refereed journals.
4. Design a research proposal using primary and secondary data resources.

HTSM 595 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Summer

HTSM 596 Tourism and the Environment
Tourism and its relationship to the physical and cultural character of place. Sustainable development, particularly when expressed as eco-tourism.
3 Cr. DEMAND

HTSM 597 Tourism Policy and Planning
Advanced planning principles and policy formulation frameworks/strategies applicable to tourism development at different scales--site, destination and regional. Case studies of applied tourism planning and policies in different countries.
Prereq.: GEOG 290 or HTSM 111 3 Cr. Spring

Student Learning Outcomes
1. Identify essential planning processes for tourism destinations.
2. Apply knowledge about tourism impacts into the planning and policy making process.
3. Appraise how tourism policies or regulations shape local/national tourism development.
4. Justify effective and sustainable tourism development policies based on planning principles.

HTSM 598 Contemporary Issues in Hospitality and Tourism
Issues and contemporary trends in hospitality and tourism.
Prereq.: Completion of a minimum of 12 credits within the Hospitality and Tourism Core or by permission of instructor. Coreq.: 3-6 Cr. DEMAND

Student Learning Outcomes
1. Assess key problems and issues in the current and future development of the global hospitality and tourism industry 2. Identify key issues facing the future development of the hospitality and tourism industry 3. Collect and evaluate primary/secondary tourism data in a particular field of interest
4. Synthesize and summarize research findings using written and oral communication skills suitable for the profession

Human Relations & Multicultural Education (HURL)

HURL 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HURL 502 Current Issues in Human Relations
Focus on problem areas in human relations. May be repeated to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HURL 506 Sexual Assault Advocacy Training
Advocacy skills for sexual assault survivors including: understanding the impact of sexual assault on survivors, the social and cultural context in which sexual assault occurs, and the role the legal system, law enforcement, social services and medical services plays with survivors.
3 Cr. Fall | Summer

HURL 508 Global Human Relations
A global analysis of racism, sexism, heterosexism, class issues, and the interrelationships of global social justice issues.
3 Cr.

HURL 511 Heterosexism
Institutional heterosexism and homophobia and the impact on lesbian-gay-bisexual-transgender-queer people.
Prereq.: HURL 201 or HURL 497 3 Cr. DEMAND

HURL 512 Disability Rights
Disability rights from the perspective of disability activists, examined within an oppression framework that analyzes the parallels and differences between ableism and other forms of oppression. Explores historical and contemporary movements for accessibility and empowerment.
Prereq.: HURL 201, HURL 497 3 Cr. DEMAND

Student Learning Outcomes

1. Understand historical and contemporary views of disability issues by activitists with disabilities.
2. Define multiple identities as well as study a variety of activist groups within the Disability Community.
3. Recognize the causes of various barriers faced by people with disabilities in areas such as physical access, transportation, employment, education, healthcare, sexuality and quality of life.
4. Apply critical thinking skills to issues of disability oppression.
5. Develop an awareness of how the media portrays people with disabilities.
6. Develop activist and advocacy skills for societal change.
7. Define personal empowerment strategies for people with disabilities.

HURL 518 Xenophobia Study

Xenophobic attitudes, practices, and their impact on human rights. U.S. interventions and issues of torture, terrorism and related war crimes.
Prereq.: HURL 201 or HURL 497 3 Cr. DEMAND

HURL 519 Genocide and Oppression

Genocidal events across time, race, technology, place, politics, legal structures, property and religion. Predictors and patterns of past and present genocidal events.
3 Cr. DEMAND

Student Learning Outcomes

1. Analyze a historical, global awareness of genocidal events through time.
2. Identify and make visible the most recent and continuing acts of genocide.
3. Evaluate the legal definitions and constraints place on social actions to address genocide.
4. Evaluate institutional and state engagement in genocide.
5. Analyze the interrelationship of concepts of race, gender, class, religious oppression, ability, and sexual orientation in the justification and implementation of genocidal actions.
6. Evaluate the means of access to media and technology in order to gain awareness and insight into the history and existence of genocidal actions.
7. Employ institutional change and pro-active strategies and effectice personal advocacy skills for addressing aspects of genocide awareness.

HURL 588 Type B Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HURL 591 Change Agent Skills

Study of the theories of social empowerment and the development of practical skills for producing institutional and personal change.
3 Cr. Fall | Spring | Summer

HURL 592 Practicum in Social Change

Experiential practicum: application of theory and research to constructive institutional and social change.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HURL 597 Human Relations for Teachers I

Analysis of individual and institutional racism, sexism, and other forms of oppression in the school environment. A social reconstructionist model of education.
Coreq.: HURL 598 3 Cr. Fall | Spring | Summer

HURL 598 Human Relations for Teachers II

Implications of racism, sexism, heterosexism, immigration issues, disability status, classism and other forms of oppression in the school setting.
Coreq.: HURL 597 1 Cr. Fall | Spring | Summer

HURL 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HURL 620 Research Methods in HURL

This course exposes students to an overview of the research process and its place in the social environment. This overview includes a critical examination of the philosophical foundations of the scientific process, specifically from the perspective of oppressed social groups. Students will learn research designs and techniques appropriate to field settings and useful for social groups not represented in the research process. Research literature focusing

on minorities, women, and other social groups will be critically examined for underlying assumptions.
2 Cr. DEMAND

HURL 621 Quantitative Methods in HURL
This course is a continuation of HURL 620. It will focus on analysis and presentation of data collected on selected social issues, especially those pertaining to race, gender, sexual preference, and poverty.
2 Cr. DEMAND

HURL 622 Professional Writing and Reporting in HURL
This course provides students with information and experiences that will enable them to write proposals for grants and contracts, research and technical reports, academic research proposals, and other professional documents in the areas of human relations and social equity.
Prereq.: HURL 620, HURL 621 2 Cr. DEMAND

HURL 630 Topics in Social Responsibility
Topics and issues in the study and practice of social responsibility. Specific titles to be listed in class schedule. May be repeated under different topics to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

HURL 680 Internship in Human Relations
Supervised experiences with selected agency school, organization, etc., that has a primary goal to facilitate the improvement of human relationships between individuals and groups.
Coreq.: 2-8 Cr. DEMAND

HURL 681 Teaching Social Justice
Techniques for facilitating human relations education. Facilitating group leadership, techniques in intergroup, interracial and non-sexist communications and instructional techniques in the study of human relations issues.
3 Cr. Summer

HURL 682 Advanced Theory and Issues in Human Relations
Advanced study of current human relations theories and application of these theories in various settings and in regard to various human relations issues.
3 Cr. Fall

HURL 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

HURL 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

HURL 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree program sand may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring

HURL 699 Thesis

Coreq.: 1-6 Cr. Fall | Spring

Information Assurance (IA)

IA 600 Special Problems
Independent study available for advanced students wishing to work out a special problem in the major area of concentration. May be repeated to a maximum of three credits.
Coreq.: 1-3 Cr. DEMAND

IA 606 Security and Cryptographic Protocols
Architecture network devices and protocols. Security protocols for authentication, e-mail, web, IP, VoIP, and wireless computing. Cryptographic techniques for providing data confidentiality, integrity, non-repudiation and information assurance.
Prereq.: Permission of instructor. 3 Cr. Fall

Student Learning Outcomes
1. Identify the threats to the security of network devices and services.
2. Evaluate the security of protocols for email, web, VoIP, electronic transactions, and wireless networks.
3. Design and analyze cryptographic methods for encryption, decryption, key verification and hashing.
4. Evaluate security of cryptographic protocols.
5. Use security standards to evaluate and secure TCP/IP-based networks and applications.
6. Evaluate the legal and social implications of cryptographic technology.

IA 612 Intrusion Detection and Prevention

Theories of intrusion detection and prevention. Tools and techniques to detect network penetration and defend against network and system attacks. Incident management. Current trends and research.
Prereq.: IA 610 3 Cr. DEMAND

IA 643 Database Application Security and Auditing

Database security challenges, architectures, and techniques, discretionary, mandatory access control, and auditing models, implementation of database security on business databases.
3 Cr. DEMAND

IA 644 Internship

Participation in a full time paid position with a cooperating business, governmental, or civic organization whose inernship program has been approved in advance by the MSIA Director.
Permission of MSIA Director. A maximum of 3 credits can be used toward graduation.
Coreq.: 1-12 Cr. Fall | Spring | Summer

IA 658 Best Practices in Data Management

Best practices for managing and manipulating data for analytical purposes. Review and application of different file structures, using database and data-mart structures to optimize access and security. Data management in a Cloud Computing environment, and importing data into business intelligence tools.
Prereq.: IS 251 or equivalent 3 Cr. Fall

Student Learning Outcomes

1. Apply the comprehensive model of information security.
2. Evaluate a comprehensive data storage policy within a cloud.
3. Devise a comprehensive security policy for a cloud.
4. Evaluate data structures and apply to data conversion problems.
5. Develop a layered data strategy and be able to identify files that have been tampered with.
6. Tune the data store strategy to the underlying hardware layer.
7. Analyze and apply the advantages of storing data in a database.
8. Analyze and apply the advantages of storing data in a data-mart.
9. Be able to transfer data into a variety of BI tools.
10. Devise a contingency/disaster data recovery plan for a cloud.

IA 659 Advanced Topics in Information Assurance

Advanced topics in IA. May be repeated to maximum of 12 credits on different topics.
3 Cr. DEMAND

IA 673 Security Policy and IT Risk Management

Advanced development of security policy in line with legal requirements; systematically identifying risks; analyzing the likelihood and impact of their occurrence; deciding what action to take to prevent, minimize, accept or transfer their risks; contingency planning.
3 Cr. Spring

Student Learning Outcomes

1. Define information security policy and understand its central role in a successful information security program.
2. Describe the three major types of information security policy and explain what goes into each type.
3. Develop, implement and maintain various types of information security policies.
4. Identify and assess potential security risk.
5. Identify the threats to information security and attacks associated with those threats.
6. Assess the risk management process.
7. Apply both quantitative and qualitative risk assessment techniques to security log data.
8. Modify a security plan based on assessment results.
9. Articulate the importance of using assessment and security tools in an ethical and legal manner.
10. Describe the risk mitigation strategy options for controlling risks.

IA 680 Seminar in Information Assurance

Information assurance and security research problems and solutions. May be repeated to maximum of six credits.
Prereq.: Prerequisite: Graduation standing and department consent. 3 Cr. DEMAND

IA 681 Digital Forensics and Ethics

Aspects of computer crimes, computer ethics, computing investigations, analyze digital evidence, evaluate computer crime.
3 Cr. DEMAND

IA 683 Application Layer Security

Systematically identifying vulnerabilities, analyzing their occurrence, corrective action options, evaluate from the aspect of the client/server model, and discuss and implement prescriptive software security

designs.
3 Cr. DEMAND

Student Learning Outcomes
1. Define the vulnerabilities present on the OSI Application layer.
2. Identify and assess potential application level risks.
3. Be able to identify application security within the client/server model.
4. Be able to apply planning techniques to insure the design of new software follows secure practices.
5. Apply both quantitative and qualitative assessment techniques to log data to assess application level vulnerabilities.
6. Suggest solutions to resolve application level security problems based on assessment results.
7. Be able to implement application level security in a web environment.
8. Describe how application level treats can pass undetected through the other OSI layers.
9. Describe the importance of secure data in ensuring security on the application level.

IA 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

IA 693 Secure Electronic Commerce
Concepts, models, consumer behaviors, payment systems, security dimension, technology and human solutions, network security and testing, emerging trends and issues.
3 Cr. DEMAND

Student Learning Outcomes
1. Define fundamental concepts of E-Commerce.
2. Identify use of Electronic Commerce.
3. Describe E-Commerce types and unique features.
4. Assess E-Commerce business models.
5. Identify E-Commerce vulnerabilities, risks, and security.
6. Apply Internet security, Web security, communication security, and infrastructure security.

IA 697 Starred Paper
Research project for Masters' students following Plan B.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IA 699 Thesis
6 credits required for the degree. May be repeated to a maximum of six credits.
Coreq.: 1-6 Cr. DEMAND

Information Media (IM)

IM 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IM 502 Information Media: Theory, Research, and Practice
Exploration of the information media field examined from the perspectives of recent research, influential theories, and current practices; professional literature, literacies, research, organization, and opportunities.
3 Cr. Fall

IM 504 Instructional Design
Fundamentals of instructional design, including theoretical background, needs assessment, analysis of learning conditions, and instructional strategies development.
3 Cr. Fall | Summer

IM 514 Technology Integration
Ways technology can help teachers and students communicate and collaborate, discussion of students as consumers, contributors, and creators in a digital age, use of technology to design authentic learning environments.
3 Cr. DEMAND

Student Learning Outcomes
1. Students will examine concepts related to technology integration.
2. Students will analyze the current research and standards on teaching and learning with technology when planning authentic learning environments and experiences for P-12 students.
3. Students will examine the significant inhibitors to the adoption of technology integration and create/design successful strategies for integrating technology to improve instruction.
4. Students will create lessons in which P-12 students can use technology to become consumers, contributors, and creators in a digital age.
5. Students will examine and apply the norms of appropriate, responsible behavior with regard to technology use (Digital citizenship).

IM 521 Information, Technology and Learning for Elementary Education

Role of technology and media for instruction in the elementary classroom. Selecting, designing, and producing instructional materials in a variety of formats to enhance teacher productivity, student creativity, and thinking skills. Elementary Education majors only.
Prereq.: Any one of the following: ART 105, CNA 169, CSCI 169, ETS 157, IM 245, IM 260 or demonstrated basic computer skills. 2 Cr. Fall | Spring

IM 522 Information, Technology and Learning for K-12 and 5-12 Education

Selecting, designing, and producing instructional materials in a variety of formats. How technology assists teacher productivity andserves as a tool for enhancing student creativity and thinking skills. Education majors only.
Prereq.: Any one of the following: ART 105, CNA 169, CSCI 169, ETS 157, IM 245, IM 260 or demonstrated basic computer skills. 2 Cr. Fall | Spring | Summer

IM 523 Information, Technology and Learning for Early Childhood Education

Role of technology and media in early childhood education. Selecting, designing, and producing instructional materials in a variety of formats. How technology assists teacher productivity and serves as a tool for enhancing student creativity and thinking skills. Child and Family Studies majors only.
Prereq.: CFS 200 3 Cr. Fall | Spring

IM 542 Workshop: Using Microcomputers in Education

How to use a microcomputer and related software for course or classroom purposes. Will explore both generic and dedicated software packages. Course may be repeated to a maximum of 3 credits.
1 Cr. DEMAND

IM 545 Children's Literature Workshop

Participants will meet children's book authors and/or illustrators who will discuss their works for children in grades K-8. Ways of using children's literature in media centers and classrooms will be explored. One credit available upon completion of written assignment. May be repeated.
1 Cr. Summer

IM 554 Developing Skills for Online Teaching and Learning

Survey of the skills and methodologies required for effective teaching and learners for an online environment.
3 Cr. Fall | Odd Summer

IM 555 Instructional Message and Visual Design

Design and production of multimedia presentations. Hardware and software skills for production of visual presentation support materials.
3 Cr. Spring | Summer

IM 556 Design and Preparation of Multimedia Presentations

Systematic approach to the production of instructor-independent multimedia presentations for informational and instructional presentations. Includes needs assessment, format selection, presentation design, equipment selection and operation, and media production.
Prereq.: IM 404 or IM 504, IM 455 or IM 555 3 Cr. Fall

IM 562 Design and Production of Video Media

Developing, designing, utilizing, evaluating, and administering video media in instructional and related programs with a focus on desktop digital technologies.
3 Cr. Spring

IM 565 Information Management

Techniques and sources for gathering information for personal and professional use.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will examine concepts related to information gathering and use, particularly information from non-traditional sources.
2. Students will be able to describe and use traditional and non-traditional sources of information.
3. Students will be able to use a variety of search strategies and data mining techniques to obtain information for job and personal decision making.
4. Students will be able to select sources of information and apply that information to specific needs.

IM 586 Seminar

Conferences, reports, readings, discussions, problems, and research in a special facet of media. May be repeated to a maximum of six credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IM 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IM 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IM 608 Research Methods in Media
Methods of evaluating research procedures and interpreting findings. Defining and limiting a problem, gathering, documenting, organization and presenting findings.
3 Cr. Fall | Summer

IM 612 Technologies in the Workplace
Definition and analysis of information technology issues associated with information acquisition, processing, storage, and delivery. Consideration of the latest trends.
3 Cr. Spring | Summer

IM 620 The Library Media Program
Foundations of K-12 library media programs. State and national standards, licensure requirements, roles and responsibilities of library media specialists, strategies for collaborating with teachers to integrate library media and technology skills into the curriculum, and examination of current issues and trends.
3 Cr. Fall

Student Learning Outcomes

1. Apply state and national laws, standards, and competencies to K-12 library media programs.
2. Incorporate current research to identify characteristics of excellent library media programs.
3. Analyze the importance of written policies, objectives, and plans for library media programs.
4. Analyze the role of library media programs in relationship to the school, the district and the community.
5. Examine the impact of library media programs to curriculum design and development, learning theory, and instructional technologies.
6. Develop leadership characteristics of library media specialists including program management skills, budgeting, and personnel management.
7. Develop advocacy strategies to assist teachers, school administrators and community members to increase awareness of the value of a strong library media program led by a licensed library media specialist and promote collaboration among the library media specialist, technology integrationists, and classroom teachers.
8. Assess the values and philosophies of library media specialists and related professional organizations.
9. Examine and model digital citizenship, including ethical practices of library media programs, for students, teachers, and administrators.

IM 621 Reading, Listening, Viewing Guidance and Selection of Resources for Children
Foundational skills for the selection and evaluation of P-6 print and digital resources and reading, listening, and viewing guidance programs for the library media specialist.
3 Cr. Spring

Student Learning Outcomes

1. Evaluate P-6 instructional programs, facilities, and resource collections.
2. Develop an integrated resource collection based on P-6 curriculum and learner needs.
3. Design a sequential integrated P-6 program of information literacy instruction.
4. Guide P-6 students in locating, critically evaluating, and communicating information.
5. Guide P-6 students in reading, viewing, and listening appropriate to their P interests, goals, needs, and abilities.
6. Model and teach responsible and ethical access to and use of information.
7. Apply educational principles relevant to the physical, social, emotional, oral, and cognitive development of young adults.
8. Identify the role and rationale in using print and digital resources across the P-6 curriculum.
9. Create a literacy rich environment that includes print and digital resources.

IM 622 Media Selection and Evaluation for Children and Young Adults

Skills and background provided to select and evaluate resources in the PK-12 environment and to examine reading, listening, and viewing guidance as a process which helps PK-12 students discover and develop literacy awareness in all formats of materials.
2 Cr. Spring | Summer

IM 623 Reading, Listening, and Viewing Guidance

Children's and young adult's authors and literature in print and non-print formats. Reading, listening and viewing guidance programs for the school media specialist.
2 Cr. Spring | Summer

IM 625 Reading, Listening, Viewing Guidance and Selection of Resources for Young Adults

Foundational skills for the selection and evaluation of 5-12 print and digital resources and reading, listening, and viewing guidance programs for the library media specialist.
3 Cr. Spring

Student Learning Outcomes

1. Evaluate 5-12 instructional programs, facilities, and resource collections.
2. Develop an integrated resource collection based on 5-12 curriculum and learner needs.
3. Design a sequential integrated 5-12 program of information literacy instruction.
4. Guide 5-12 students in locating, critically evaluating, and communicating information.
5. Guide 5-12 students in reading, viewing, and listening appropriate to their interests, goals, needs, and abilities.
6. Model and teach responsible and ethical access to and use of information.
7. Apply educational principles relevant to the physical, social, emotional, oral, and cognitive development of young adults.
8. Identify the role and rationale in using print and digital resources across the 5-12 curriculum.
9. Create a literacy rich environment that includes print and digital resources.

IM 626 Accessing and Organizing Information

Access and organization of information resources and services used in P-12 education, standards and systems for the creation and maintenance of records.
3 Cr. Spring

Student Learning Outcomes

1. Students will be able to guide P-12 students in locating and critically evaluating information and to assess the processes and products of the learning.
2. Students will be able to acquire, process, organize, maintain, circulate, and inventory resources in a P-12 environment.
3. Students will identify and acquire resources beyond those available in a school library media center to expand information access for P-12 students.
4. Students will evaluate P-12 school program needs for information collections and organization and implement changes.
5. Students will model and teach responsible and ethical access to and use of information.
6. Students will interpret and promote the P-12 information literacy program.
7. Students will apply educational principles relevant to the physical, social, emotional, moral, and cognitive development of children, preadolescents, and adolescents.
8. Students will develop curriculum goals and purposes based on the central concepts of information literacy and apply instructional strategies and materials for achieving P-12 student understanding.
9. Students will develop curriculum goals and purposes based on the central concepts of information literacy and apply instructional strategies and materials for achieving P-12 student understanding.

IM 628 Administration of Media

Basic theory and techniques of administering media programs and service. It is recommended that this course be taken during the latter part of the IM program as preparation for the practicum.
Prereq.: IM 502, IM 620 3 Cr. Spring | Summer

IM 632 Training/Human Resource Development

Performance improvement, practices and organizations.
3 Cr. Even Fall

Student Learning Outcomes

1. Analyze the concept of training/human resource development, related professional organizations, and critical literature in the field.
2. Analyze instructional and non-instructional interventions and utilize appropriate performance support techniques and methods to improve performance.

3. Utilize the theories of learning, adult learning, motivation and communication to design and develop training including technology, orientation, diversity, sexual harassment, team builiding, or cross-cultural training.
4. Describe the principles of project management.
5. Create evaluation and assessment tools, summarize data, interpret given evaluation data and report it in a professional manner.

IM 633 E-learning Design

Advanced study of systematic instructional design including m-learning, social learning, and game-simulation.
Prereq.: IM 404 or IM 504 3 Cr. Spring

Student Learning Outcomes

1. Discuss implication of existing and new theories for e-learning design.
2. Apply research findings in instructional use of emerging media in the e-learning field.
3. Analyze critical factors associated with successful e-learning.
4. Design, develop, and evaluate the instructional materials for e-learning.
5. Collaborate with SMEs in a professional manner.
6. Apply best practices in e-learning.

IM 639 Evaluation and Assessment in Instructional Programs

Creating instruments for strategic and systematic evaluation of instructional programs and assessment of student learning.
Prereq.: IM 404 or IM 504 3 Cr. Spring

Student Learning Outcomes

1. Distinguish formative, summative, confirmative, and usability evaluation.
2. Explain the relationship between evaluation and instructional objectives.
3. Select methods and construct evaluation tools appropriate for types of learning.
4. Apply the concepts related to implementation: diffusion, dissemination, adoption, adaptation, integration, and stakeholders.
5. Analyze changing conditions of a given organization/environment.
6. Analyze critical components of diffusion process.
7. Create a plan for improving implementation based on principles and models.

IM 646 Facilitating and Administering E-Learning

Theories and techniques of e-learning process facilitation and administration of distributed education programs and service.
Prereq.: IM 554 3 Cr. Even Fall

Student Learning Outcomes

1. Analyze how learners interact with each communication technology in order to facilitate productive disucusions among diverse learners.
2. Evaluate and select appropriate learning environments and technologies for online learning.
3. Manage projects including technology design and development for Internet-based learning environments.
4. Implement, manage and support online learning.
5. Conduct cost analysis and determine Return on Investment for online/distributed learning.
6. Assure that online resources for teaching and learning adhere to laws (such as student data privacy and intellectural property) regulations and standards(such as SCORM, accessibility) compliance.
7. Manage application of quality standards to development of online learning.

IM 656 E-learning Authoring

Application of e-learning theoretical background to instructional programs including authoring programs and software; selection, utilization, and evaluation of existing programs; individual experience in planning, designing and producing programs.
Prereq.: IM 456 or IM 556, IM 633 3 Cr. Spring

IM 680 Internship in Media

Intern experiences relating to information, instructional design, and organizational media in all their practical facets. May be repeated to maximum of six credits.
Prereq.: IM 633 Coreq.: 1-6 Cr. Fall | Spring | Summer

IM 681 Internship in Technology Integration

Intern experiences relating to media and technology and instructional design in all their practical facets. May be repeated to maximum of six credits.
Prereq.: 30 graduate credits in IM or permission.
Coreq.: 1-6 Cr. Fall | Spring

Student Learning Outcomes

1. Students will describe their technology skill needs and write performance objective for reaching them.
2. Students will communicate in oral and written format progress toward reaching their objectives and completion of projects assigned to them.

3. Students will demonstrate their ability to transfer the theory, research and skills to actual problems and projects at the assigned site.
4. Students will demonstrate their ability to read the organizational culture and adapt to it, as determined by a comparison of intern self-assessment and the assessments of the site supervisor and university intern coordinator.

IM 682 Library Media Specialist Practicum
A field experience individualized to take into account license requirements for the library media specialist, the candidate's previous experience, special needs, and other special circumstances.
Coreq.: 1-6 Cr. Fall | Spring

IM 686 Seminar in Media
Conferences, reports, readings, discussions, problems, and research in a special facet of media. May be repeated to a max. of 6 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IM 687 Readings in Media
Selected readings of literature of the field and related areas.
Coreq.: 1-2 Cr. Fall | Spring | Summer

IM 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IM 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

IM 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IM 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IM 696 Portfolio
Independent creation of products for graduate candidates completing the requirement for Plan C, Portfolio.
2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Students will identify a theme of products within the field of Information Media to demonstrate their knowledge and abilities in the field through a portfolio of products.
2. Students will apply research knowledge to a specific theme in the field of Information Media through an analysis of the literature, a synthesis of the products created following departmental and university guidelines.
3. Students will assume responsibility for planning and completing independent learning.

IM 697 Starred Paper
Independent research for graduate candidates completing the requirements of Plan B Starred Paper.
2 Cr. Fall | Spring | Summer

IM 698 Creative Work
Coreq.: 1-6 Cr. Fall | Spring | Summer

IM 699 Master's Thesis
Coreq.: 1-6 Cr. Fall | Spring | Summer

Information Systems (IS)

IS 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IS 534 Introduction to Data Analytics
Fundamentals of Data Analytics (DA). Systematically applying statistical or logical techniques to describe and evaluate data. How managers use business analytics to formulate and solve business problems and to support managerial decision making.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Evaluate the strategic purposes of analytics in the business organization.
2. Analyze and provide solutions to business problems using analytics.
3. Apply appropriate use of analytics in different business scenarios.

4. Describe how the data collection process and data analytics works.
5. Effectively communicate appropriate usage of data analytics using a variety of communication systems.

IS 540 Advanced Business Statistics
Applied multiple regression and correlation analysis, analysis of variance with two or more variables of classificaton, and multivariate techniques.
Prereq.: IS 241 3 Cr. DEMAND

IS 542 Business Statistics
Numerical and graphical descriptive statistics and inferential procedures. Selected statistical topics with major emphasis on applications in business.
2 Cr. Fall

IS 543 Database Design, Implementation and Administration
Entity relationship modeling, normalization, and implementation of utilizing SQL at both server and client side applications. Concurrency control methods and data security management.
Prereq.: IS 250 or equivalent programming course. No prerequisite for Information Assurance (IA) major, Computer Science (CSCI) major, or Computer Networking and Application (CNA) major. 3 Cr. Fall | Spring

IS 544 Information Technology Foundations
Conceptual foundations of IS, roles of computer-based IS systems in business including strategic competitive uses, global and ethical issues.
2 Cr. Spring

IS 545 Application Program Development III
Topics in business application program development. Programming languages, development techniques, and development environments.
Prereq.: IS 251 3 Cr. DEMAND

IS 546 Information Technology for Competitive Advantage
Concepts of information technology affecting the industrial environment, cost reduction, product differentiation, competitive scopes, and new products/services development.
3 Cr. DEMAND

IS 550 Strategy, Management and Acquisition
IT impact on business strategy, capabilities, and value. IT leadership, function to support business, and acquisition.
3 Cr. Fall | Spring

IS 551 IT Infrastructure
IT infrastructure issues such as Internet-based architecture, computer and network security, business continuity, and the role of infrastructure.
3 Cr. Fall | Spring

IS 552 Unix Operating Systems Principles
Analysis and management of commands, processes and network links. Applications management. Decision-support mechanisms and log analysis. Script writing for customizing application streams.
3 Cr. Fall | Spring

Student Learning Outcomes
1. List the advantages/disadvantages of the Unix operating system.
2. Effectively use the command language from the shell.
3. Manage project developing processes.
4. Analyze a Unix installation and offer improvements in regard to efficiency.
5. Set up and manage users and their associated directory/file structure.
6. Set up the network logic and address on an external interface.
7. Analyze log files and parameters for a decision support system.
8. Use the Unix operating system to optimize execution of application programs.
9. Write scripts to optimize the execution of application streams.

IS 554 Decision Support Systems
Information systems for management decision making. Decision making processes, model base development, and knowledge management. Design, implementation and evaluation of decision support systems.
3 Cr. Spring

IS 555 Business Research Methodology
Planning, organizing, and executing a research project. Sampling techniques, design of experiments, interpretation and presentation of business data analysis.
Prereq.: IS 241 3 Cr. DEMAND

IS 558 IS Innovation and New Technologies
E-commerce and e-Business issues such as models, e-markets, security, social networks, e-communities,

social, ethical and legal issues and emerging technologies.
3 Cr. Fall

Student Learning Outcomes
1. Students will identify foundational and fundamental concepts of Electronic Commerce, e-Business, and M-business.
2. Students will apply new IT concepts to real world.
3. Students will evaluate innovation and new information technology.

IS 559 Topics in Information Systems
Recent developments in concepts, theory, practices in the analysis, design, and implementation of management information systems. May be repeated with different topics to a maximum of 9 credits.
3 Cr. Fall | Spring

IS 560 Project Management
Strategies, processes, and integration techniques in the management of software development projects. Planning, staffing, scheduling, controlling, and quality assurance.
3 Cr. Fall | Spring

IS 573 Operational Software Safeguards
Implementation of network security policy. Evaluation of hacker tools. Preventative measures. Monitoring attacks and analyzing logs.
3 Cr. Fall

IS 583 Client/Server Security
Security problems related to client/server computing. Benchmarking client/server application in relation to virus protection, firewall configurations, authentication/encryption. Secure client/server design strategies.
3 Cr. Spring

IS 584 Business Process Management
Concepts and strategies for improving business processes such as process design principles, challenges, organizational change, outsourcing, and inter-organizational process.
3 Cr. Fall

Student Learning Outcomes
1. Students will define business processes.
2. Students will assess business processes performance.
3. Students will design business process improvements.
4. Students will identify roles and potentials of IT to support business process management.
5. Students will design how to support business process change.
6. Students will create simple business processes and evaluate simulation results in business process analysis.

IS 585 Enterprise Systems
Theoretic and practical issues related to the application of enterprise systems within organizations.
3 Cr. Spring

Student Learning Outcomes
1. Students will evaluate the costs and benefits of implementing an enterprise system.
2. Students will explain how enterprise systems integrate functional areas into one enterprisewide information system.
3. Students will describe how an organizational process often spans different functional areas.
4. Students will describe the role of enterprise systems in carrying out processes in an organization.
5. Students will explain how integrated information sharing increases organizational efficiences.
6. Students will identify, describe, and evaluate the major enterprise system software providers and their packaged systems.

IS 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IS 598 Business Consulting
Teams of students work as consultants to area businesses and non-profit organizations to diagnose and solve actual business problems. Written and oral report required.
Prereq.: IS 242, or STAT 242, ACCT 292, FIRE 371, MGMT 201, MKTG 220 or permission of department
3 Cr. Fall | Spring

IS 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IS 632 MBA Management Support Systems
Current topics in technology supported business decision making, reengineering, and related management strategies. Variety of management support technologies, modeling and decision making techniques.
Prereq.: BCIS 340 3 Cr. Fall

IS 633 MBA Topics in Management Information
Recent developments in concepts, theory, practices in the analysis and design of management information systems.
Prereq.: IS 340 Coreq.: 1-3 Cr. DEMAND

IS 634 MBA Information Technology Management
Managing information technology to create competitive advantages. Changing business process, adding value to products, and creating sustainability.
Prereq.: IS 340 3 Cr. Spring

IS 635 MBA Management of Technology
Basic elements of the management of technology. Understanding of public policy, product development and managing innovation.
Prereq.: IS 340 3 Cr. DEMAND

IS 690 Selected Topics
May be repeated to a max. of 9 Credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IS 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IS 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

IS 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

International Business (INTL)

INTL 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Japanese (JPN)

JPN 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Jewish Studies (JWST)

JWST 501 Credit by Arrangement
Credit by arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Languages and Cultures (LC)

LC 553 Teaching a Foreign Language in the Secondary School
Methodologies for teaching another language. Professional development through writing of lesson and unit plans, mini-teaching demonstrations by students, and assessment of 5 modalities. Must be taken before French, German or Spanish 454-554.
Prereq.: ENGL 361, CEEP 262 (or equivalent Tchr Dev semester course), and previous or concurrent enrollment in Spanish, French, or German 451 and 452, and admission to BS foreign language major/minor. 3 Cr. Fall

LC 555 Teaching of Modern Foreign Languages in the Elementary Schools
Language acquisition theory, developmental considerations, curriculum development, and instructional strategies for second language learning by children. Must be taken before French, German or Spanish 456/556.
Prereq.: Foreign language or elementary school teaching license or permission. 3 Cr. Spring

LC 561 Teaching a Second Language: Theory and Methods

Emphasis on the variety of methods used in teaching a second or foreign language with special attention to oral skills.
3 Cr. DEMAND

Student Learning Outcomes
1. Evaluate theories of how learners grow and develop in first and second language acquisition including similarities and differences between child, adolescent and adult language acquisition and identify how patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas.
2. Identify, select, design, and prepare a variety of methods, techniques, and program models suitable for second language instruction with diverse learners including content based methodologies to meet the needs of student and to differentiate instruction where appropriate in an environment that supports individual and collaborative learning, and that encourages positive social interaction, active engagement in learning, and self-motivation.
3. Identify, select, design, prepare, assess and reflect on communicative language teaching and instruction in the second or foreign language contexts with a focus on developing communication skills in listening, speaking, reading, and writing across the curriculum.
4. Identify, select, design, and prepare instruction in the teaching of a foreign or second language that integrates an understanding of second or foreign language with the teacher's understanding of pedagogy, students, learning, classroom management, and professional development and differentiates instruction so that learners are encouraged to develop a deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.
5. Design and integrate instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.
6. Identify, select and plan for the use of educational technology in every aspect of instruction from planning to assessment.
7. Develop curriculum goals and purposes based on the central concepts of language and culture and know how to apply instructional strategies and materials for achieving student understanding of the language and culture.

LC 562 Second Language Teaching Methods: Reading and Writing

Application of second language acquisition theory and methods to the teaching of reading and composition
3 Cr. DEMAND

Student Learning Outcomes
1. Adopt and adapt multiple forms of instructional approaches based on the understanding of various factors that influence the patterns of learning and development, as well as learning difference.
2. Design lesson plans that reflect the interaction between content learning and language learning and support every student in meeting rigorous learning goals.
3. Develop learning tasks that promote literacy and communication skills in both spoken and written language.
4. Design assessment tools that reflect the developmental aspects of second language acquisition and its implications for content learning.
5. Collaborate to identify and incorporate appropriate instructional approaches to create learning environments conducive to positive social interaction and active engagements.
6. Reflect on his/her practice to evaluate his/her instructional choices and adapt to meet the needs of each learner.
7. Understand the impact of reading ability on student achievement in second language studies, recognize the varying reading comprehension and fluency levels represented by students, and possess the strategies to assist students to read second language content more effectively.

Library (LIB)

LIB 590 Digital Storytelling

Traditional storytelling juxtaposed to digital storytelling to improve oral, writing, research and technology skills. Combines aspects of the narrative structures that make-up the story, history, and mystery of our lives and our participation in society.
3 Cr. DEMAND

Student Learning Outcomes
1. Analyze the differences between traditional narrative storytelling and digital storytelling 2. Use an appropriate vocabulary to research, develop and create projects in digital med 3. Describe properties and differences among various digital media 4. Find appropriate digital resource materials and capture

and manipulate digital image, sound, and video 5. Integrate different media (text, images, sound, video) into a seamless online environment 6. Ability to critique digital narrative

Latin American Studies (LAST)

LAST 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

LAST 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

LAST 600 Special Problems
Independent Study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

LAST 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

LAST 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

LAST 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

LAST 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Management (MGMT)

MGMT 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MGMT 527 International Business Management: European Perspective
Focus on both the interpersonal skills and business knowledge needed in cross cultural management. Taught only in Ingolstadt, Germany
3 Cr. Fall | Spring

MGMT 528 Topics in Management
Issues in management. Permission of instructor. May be repeated with different topics to a maximum of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Identify main ideas and concepts of the topic including definitions, vocabulary, and terms.
2. Analyze how the issues apply to general management and assist in positioning the firm in the competitive environment that supports a sustainable competitive advantage.
3. Distinguish between relevant and irrelevant information and valid and invalid arguments.
4. Elaborate, refine, analyze, and evaluate their own ideas in order to improve strategic decision-making abilities.
5. Respond to new and diverse perspectives.
6. Demonstrate career and life skills such as leadership and responsibility, problem-solving, productivity and accountability, and flexibility and adaptability.

MGMT 550 Employee Selection
Management of human resources from the labor market into and through the firm, including job analysis, predictor selection and validation, interview development, and maintaining legal defensibility.
Prereq.: MGMT 352 3 Cr. Fall

MGMT 551 Employee and Labor Relations
The management of employee-employer relationships. Individual versus collective bargaining (organizing, negotiating and bargaining), dispute resolution, and alternative labor-capital conflict resolution systems in the U.S. and other countries.
Prereq.: MGMT 352 3 Cr. Fall

MGMT 552 Employee Compensation
Compensation theories and practices, and their effects on employee recruitment, motivation,

productivity, retention, satisfaction, and morale.
Prereq.: MGMT 352 3 Cr. Spring

MGMT 553 Employee Development
Assessing training and development needs, developing and evaluating programs via empirical designs, using technology, administering contents, and selecting methods.
Prereq.: MGMT 352 3 Cr. Spring

MGMT 559 Strategic Human Resource Management
Staffing, compensation, and employee/labor relations within the firm, focusing on current and emerging topics and developing integrated policies supporting organization strategies.
Prereq.: MGMT 450, MGMT 451, MGMT 452 3 Cr. Spring

MGMT 566 Strategy and Organization of Public Administration
Problems in bureaucratic organizations that arise from the political system and a non-profit orientation. Strategy formulation and decision-making in the non-business sector.
3 Cr. DEMAND

MGMT 567 Leading Organizational Change
Elements involved in planned organizational change including linkages between the external environment and organization architecture, organization development, organization design, work design, leadership, communication, organization culture, and interpersonal and group processes.
Prereq.: MGMT 365 3 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Convey information verbally and in writing effectively.
2. Diagnose organization development needs and identify appropriate change methodologies.
3. Analyze the impact organizational culture plays in change processes.
4. Explain group processes and how teams and organizational units function.
5. Evaluate the role of leaders in organization development.

MGMT 570 International Business Management
Cultural, economic, political, social and physical environment of doing business abroad. Theories of management for effective coordination of human and material resources in international business.
3 Cr. Fall | Spring | Summer

MGMT 579 International Business Seminar
The international business environment of geo-economic-political national cooperatives; cultural factors, technology transfers, and human resource capabilities.
Prereq.: MGMT 470 3 Cr. Spring

MGMT 583 Manufacturing Operations Mangement
Systems and sub-systems needed to achieve world-class manufacturing status. Systems examined include ERP, MRP, JIT, and DRP.
Prereq.: MGMT 383 3 Cr. Fall

MGMT 584 Supply Chain Management
The flow of materials from the supplier to customer. Integration of functional areas such as purchasing, materials management, and distribution.
Prereq.: MGMT 383 3 Cr. Spring

MGMT 585 Service Operations Management
Design and management of service delivery systems. Operational aspects of service organizations: understanding customer satisfaction, selecting, training, and empowering employees, matching technology to strategy, defining and measuring quality, and designing facilities.
Prereq.: MGMT 383 3 Cr. Fall

MGMT 586 Managing for Quality
Total quality management for manufacturing and service organizations: including strategic quality planning, understanding customer satisfaction, the role of human resources, benchmarking, quality costs, statistical tools and reengineering.
Prereq.: MGMT 383 3 Cr. Spring

MGMT 588 Type B Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of gradaute students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MGMT 598 Business Consulting
Teams of students work as consultants to area businesses and non-profit organizations to diagnose and solve actual business problems. Written and oral report required.
Prereq.: MGMT 301, ACCT 292, IS 242, FIRE 371, MKTG 320, or permission of department. 3 Cr. Fall | Spring

MGMT 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MGMT 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MGMT 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

MGMT 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MGMT 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MGMT 699 Master's Thesis
Master's Thesis.
Coreq.: 1-3 Cr. Fall | Spring | Summer

Marketing (MKTG)

MKTG 501 Credit by Arrangement
Students who receive approval must register for (name of department or program) 501 (title of course). A maximum of six credits earned under the 501 course number may be applied to a Master's degree program. This procedure is open only to students admitted to a graduate degree program.
Coreq.: 1-3 Cr. DEMAND

MKTG 502 Product and Price Management
Product and price management in marketing decision-making; new product development; product/brand management: pricing policies.
Prereq.: MKTG 220 or equivalent 3 Cr. Fall | Spring | Summer

MKTG 503 Principles of Promotion
Principles of advertising, sales promotion, personal selling, and direct marketing.
Prereq.: MKTG 220, MKTG 321, MkTG 322 or equivalents 3 Cr. Fall | Spring | Summer

MKTG 504 Distribution Management
Movement of products and services from producer to consumer, channels of distribution; logistics. Successful completion of this course satisfies the Upper Division Writing Requirement.
Prereq.: MKTG 220 or equivalent 3 Cr. Fall | Spring | Summer

MKTG 511 Retail Management
Strategic retail management decisions regarding pricing, promotion, merchandising, site location, store planning and design, and personnel.
Prereq.: MKTG 220 or equivalent 3 Cr. Fall

MKTG 512 Retail Merchandising
Buying and selling in retail management: merchandise assortment planning; fashion merchandising; retail buying; preparing and pricing merchandise for resale.
Prereq.: MKTG 220, MKTG 411 or quivalents 3 Cr. DEMAND

MKTG 513 Business Marketing Management
Business-to-business marketing; organizational buyer behavior and management strategies.
Prereq.: MKTG 320 3 Cr. Summer

MKTG 514 Promotion Management
Promotion policies and practices in campaign planning, media selection, client-agency relationships, research and testing; creation of a promotional campaign.
Prereq.: MKTG 320, MKTG 403 3 Cr. Spring

MKTG 515 Professional Selling
Personal selling from an analytical and decision-making perspective.

Prereq.: MKTG 220 or equivalent 3 Cr. Fall | Spring | Summer

MKTG 516 Global Marketing Strategy
The importance of global marketing to the U.S. economy; problems, opportunities and practices of managing multinational marketing activities; characteristics and structure of international markets.
Prereq.: MKTG 220 or equivalent 3 Cr. Fall | Spring

MKTG 517 Global Promotional Strategies
Promotional strategies in the international marketplace, including advertising, personal selling, and sales promotion.
Prereq.: MKTG 320 3 Cr. DEMAND

MKTG 518 International Business Seminar
Problems faced by international businesses; policy and decision-making processes in the global environment.
Prereq.: MKTG 320 and MKTG 416-516; MGMT 470-570 3 Cr. DEMAND

MKTG 519 Marketing of Services
Marketing profit and non-profit services. Differences between services and physical goods. Internal and external marketing issues.
Prereq.: MKTG 220 or equivalent 3 Cr. Fall | Spring | Summer

MKTG 520 Electronic Marketing
Identifying marketing opportunities on the Internet; creating on-line marketing programs; electronic advertising, retailing and commerce.
Prereq.: MKTG 220 or equivalent 3 Cr. Fall | Spring

MKTG 525 Seminar in Sales Management
Activities involved in managing a sales force; sales manager's decision-making with respect to formulation, implementation, and evaluation of sales programs; case emphasis.
Prereq.: MKTG 220 or equivalent Coreq.: MKTG 415 or equivalent 3 Cr. Fall | Spring

MKTG 527 International Marketing
Exploration of how global marketing and international trade can help firms meet customer demand, reduce costs, and provide valuable information on potential markets around the world. Taught in Ingolstadt, Germany.
3 Cr. Fall | Spring

MKTG 588 Television
Exact nature of the course to be offered on television will be defined by the department.
Coreq.: 1-3 Cr. DEMAND

MKTG 598 Business Consulting
Teams of students work as consultants to area busineses and non-profit organizations to diagnose and solve actual business problems. Written and oral presentation required.
Prereq.: MKTG 220; ACCT 292; IS 242 or STAT 242; FIRE 371; MGMT 201 or permission of department 3 Cr. Fall | Spring

MKTG 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. DEMAND

MKTG 605 Business Seminar--Marketing
Selected topics related to marketing theory and/or practice; specific topic selected for each offering.
3 Cr. DEMAND

MKTG 626 Reading in Marketing
Special readings in a subject area identified by the student and instructor. Permission of department.
Coreq.: 1-3 Cr. DEMAND

MKTG 633 Business Case Analysis
Independent graduate level research culminating in a written and/or oral presentation.
Coreq.: 1-3 Cr. DEMAND

MKTG 690 Selected Topics
Selected topics. Select special title for each offering. May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

MKTG 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

MKTG 694 Selected Topics
Selected topics. Select special title for each offering. May be repeated to a maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

MKTG 695 Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option. (See Academic Regulations.)
Coreq.: 1-3 Cr. DEMAND

MKTG 699 Master's Thesis
Master's Thesis.
Coreq.: 1-1 Cr. DEMAND

Marriage and Family Therapy (MFT)

MFT 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration. May be repeated to a maximum of three credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MFT 619 Professional Orientations and Ethics
Ethical and legal considerations and making informed ethical decisions based on the American Association for Marriage and Family Therapists (AAMFT) code of ethics and the Minnesota statutes.
3 Cr. Spring

Student Learning Outcomes
1. Demonstrate knowledge of AAMFT code of ethics. (PO4) 2. Demonstrate knowledge of Minnesota statutes pertaining to the practice of marriage and family therapy. (PO2, PO4) 3. Apply knowledge of code of ethics and state statutes to case studies. (PO4) 4. Demonstrate ability to research and make decisions when faced with an ethical dilemma. (PO4, PO5) 5. Articulate how your own values influence your ethical practice. (SLO2)

MFT 620 Family Systems
Development and dynamics of intimate relationships, the stages of marriage and family life, family challenges and opportunities and better understanding of cybernetics and human systems.
3 Cr. Fall

Student Learning Outcomes
1. Understand family systems theory vis-a-vis family relationships over the family life cycle. (PO 1) 2. Understand cybernetics and human systems to work with families and other interactional systems of varying professions and subcultures. (PO 1, PO 3) 3. Increased ability to think critically about the scientific issues underlying contemporary theories and research about families. (PO 5) 4. Increased ability to think critically about values issues underlying contemporary theories and research about families. (PO 5) 5. Research literature regarding the benefits of marriage to children, families, and society. (PO 5) 6. Explore his/her own experience and values about family life as it relates to future professional roles. (SLO 2) 7. Develop professional writing habits in accordance with APA style. (PO 3)

MFT 621 Family Conceptual Frameworks
Changing philosophies of science and explore the effects of scientific philosophy on family theory, research, and practice.
3 Cr. Fall

Student Learning Outcomes
1. Gain a greater understanding of the forms and functions of families and the changing definition of families across diverse family groups. (SLO 3) 2. Recognize the importance of utilizing theory to guide clinical practice in diverse family settings. (SLO 6) 3. Be able to identify and define the key concepts and assumptions of each theory and framework and its relevance in working with families from diverse cultural backgrounds. (SLO 6) 4. Develop an understanding of the strengths and weaknesses of each theory and framework. (PO 5)

MFT 624 Family Assessment
Strengths and limitations of different assessment strategies with couples and families including assessments based on observation, therapist/rater, family report and interactional methods.
3 Cr. Summer

Student Learning Outcomes
1. Demonstrate knowledge of several well-known self-report inventories used to assess family and couple dynamics. (SLO 5) 2. Identify ways to assess the appropriateness of paper-pencil inventories for clinical practice. (SLO 5) 3. Think critically about using assessment with diverse populations. (SLO 5) 4. Score and report on findings for various family and couple self-report inventories. (SLO 5) 5. Synthesize information from various assessment points to develop systemic hypotheses. (PO 1; SLO 5)

MFT 627 Clinical Issues in Marriage and Family Therapy

Integration of clinical issues such as family stress and coping, gender roles, and sexuality, that often present when providing marriage and family therapy.
3 Cr. Fall

Student Learning Outcomes

1. Identify and evaluate strengths and limitations of key concepts and systemic theories related to stress in families. (PO 1) 2. Understand the nature of gender in family relations, including underlying assumptions, values, and attitudes. (PO 3) 3. Identify key methodological issues and be able to evaluate and critically judge the validity of clinical issues research. (PO 5) 4. Acquire an understanding of sexual pathologies, disorders, dysfunctions, and treatment modalities. (SLO 4) 5. Develop appreciation for diverse sexual values and life styles with respect to cultural contexts and to clarify personal values, ethics, and beliefs as related to sexuality. (PO 3) 6. Synthesize literature from family stress theory with clinical issues often resulting from stress, such as alcohol or drug abuse, violence. (PO 5)

MFT 628 Child Development and Treatment

Child development, etiology, classification, and treatment of child and adolescent psychological disorders.
3 Cr. Summer

Student Learning Outcomes

1. Demonstrate knowledge of child developmental issues. (SLO 1) 2. Integrate general developmental issues and apply them to each of the specific disorders covered in the course considering culture and ethnicity. (SLO 4) 3. Describe the etiologic and systemic factors for child disorders in general, as well as for each of the specific disorders. (PO 1)
4. Demonstrate knowledge of general diagnostic and assessment issues as they relate to diagnostic classification of each of the specific disorders considering culture and ethnicity. (SLO 5)
5. Demonstrate knowledge of general treatment issues and develop effective, empirically-based treatment plans for children including children from diverse cultures and ethnic backgrounds who present with the specific disorders. (SLO 4)

MFT 630 Special Topics in Marriage and Family Therapy

Seminar in marriage and family therapy. May be repeated with different topics up to 9 credits.
3 Cr. DEMAND

MFT 658 Culture and Family

Study of culturally diverse couples and families with special emphasis on understanding the significance of cultural contexts in working with people of different cultures.
3 Cr. Fall

Student Learning Outcomes

1. Define family ethnicity and articulate its connection to related concepts such as culture, class, gender, and racism. (PO 3) 2. Describe the typical immigration pathways and historical backgrounds of the major ethnic groups of the families studied in the course. (PO 3) 3. Discuss examples of diversity in families within ethnic groups related to the practice of marriage and family therapy, interpreting how such diversity might lead to differential outcomes. (PO 3; SLO 5) 4. Recognize and understand some of the dynamics and effects of racism, privilege, discrimination, and ignorance in our understanding of multiculturalism. (PO 3; SLO 5) 5. Balance a given family's unique characteristics (attributable to ethnicity) with family characteristics common to all groups in the United States. (PO 3) 6. Propose effective approaches for working with ethnic families in marriage and family therapy settings. (PO 3)

MFT 659 Psychodiagnosis, Assessment and Treatment Planning

Diagnostic process, assessment, and treatment planning for individual, marital, family, and systemic disorders and dysfunctions.
3 Cr. Spring

Student Learning Outcomes

1. Demonstrate knowledge of DSM V categories and diagnostic criteria. (SLO 5) 2. Accurately apply DSM V diagnostic criteria to case studies. (SLO 5) 3. Examine gender, racial/ethnic, and cultural factors in the diagnostic process.
4. Critically examine the use of DSM V from an eco-systemic perspective. (PO 1; SLO 5) 5. Write a diagnostic assessment per state guidelines. (SLO 3 & SLO 5) 6. Write a treatment plan that is directly linked to a diagnostic assessment. (SLO 3 & 5)

MFT 668 Professional Skills and Procedures

Development of the essential skills for working with individuals, couples, families and groups to

conceptualize client concerns, establish goals, and apply systemic interventions.
3 Cr. Fall

Student Learning Outcomes
1. Demonstrate an understanding of the therapeutic process, from a systemic perspective. (PO 1) 2. Gain awareness of interpersonal skills and self as therapist related to therapeutic effectiveness in MFT. (SLO 4) 3. Demonstrate the verbal and non-verbal skills associated with attention to therapeutic process. (SLO 4) 4. Develop skills in assessing the client's level of functioning. (SLO 5) 5. Develop and practice skills in asking appropriate, systemic questions. (PO 1) 6. Become acquainted with therapeutic interventions for individuals, couples, and families, and their appropriate use. (SLO 4, 5)

MFT 669 Clinical Practicum

Utilizing therapy skills, tools, and knowledge in actual therapeutic situations under supervision.
Prereq.: MFT 621 Coreq.: MFT 626, MFT 659, MFT 668, MFT 671 4 Cr. Spring

Student Learning Outcomes
1. Develop paperwork skills necessary in clinical practice, including informed consent, psychosocial assessment, and progress notes. (SLO 3, SLO 5) 2. Demonstrate the ability to provide the core conditions of the facilitative relationship. (SLO 4) 3. Demonstrate competence and sensitivity to racial, ethnic, gender, and religious differences that may exist between therapist and client. (SLO 4) 4. Analyze and present how one's own family of origin and cultural background impacts their clinical skills. (PO 2) 5. Conceptualize clinical issues systemically. (PO 1)

MFT 671 Theories of Marriage and Family Therapy

Comprehensive critique of major theories of marital and family therapy with emphasis on clinical integration of models considering culture, race, ethnicity, gender, and age.
Prereq.: MFT 621 3 Cr. Spring

Student Learning Outcomes
1. Be provided with a contextual understanding of the development of the field of family therapy. (PO 1) 2. Understand the similarities and differences among the major family therapy models. (PO 1) 3. Evaluate the value assumptions underlying the major family therapy models in terms of race, culture, and ethnicity. (PO 3) 4. Evaluate their family of origin in light of these theoretical models. (SLO 2) 5. Arrive at systemic therapeutic model that fits their own theoretical, clinical, and personal style. (PO 1)

MFT 672 Couple and Family Therapy: Advanced Theory and Practice

Interventions into problems faced by couples at various ages and stages of their relationship. Developing and implementig effective strategies for problem solving, relationship maintenance, and partner growth.
Prereq.: MFT 619, MFT 620, MFT 621, MFT 624, MFT 659, MFT 668, MFT 671 3 Cr. Spring

Student Learning Outcomes
1. Become knowledgeable of major marriage and couple debates in research, policy, and the clinical fields. (PO 5) 2. Understand the factors that foster change in couple relationships from diverse cultural backgrounds. (PO 3) 3. Experiment with various clinical approaches in developing a comfortable style of working with couples from diverse cultural backgrounds. (PO 3) 4. Refine skills in working collaboratively with couples in ways that foster hope, optimism and lead to movement in the direction of the clients' goals using systemic thinking. (PO 1) 5. Gain increased sensitivity to the impact of economic and cultural factors on couple relationships. (PO 3)

MFT 675 Research Methods

Quantitative and qualitative research designs. Internal and external validity. Needs assessments, program/treatment evaluations, and the critical reading of published research.
Prereq.: CEEP 678 3 Cr. Spring

Student Learning Outcomes
1. Develop an understanding for the application of the scientific method to psychotherapeutic issues. (PO5) 2. Demonstrate knowledge of the components of both quantitative and qualitative research methods. (PO5) 3. Apply critical thinking for ethical issues regarding research and evaluation efforts. (PO 4, PO5) 4. Demonstrate knowledge of the relevant data analytic procedures. (PO5) 5. Develop and write a well-designed research proposal. (PO5, SLO3) 6. Critique published research. (PO5)

MFT 691 Enrollment Continuation

Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis,

starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
Coreq.: 1-10 Cr. Fall | Spring | Summer

MFT 696 Supervised Internship

Practical training experience in an agency setting.
Prereq.: MFT 619, MFT 620, MFT 621, MFT 624, MFT 659, MFT 671 Coreq.: 3-6 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Develop and maintain appropriate therapeutic relationships with clients at their internship site. (PO 4, SLO 4) 2. Build professional relationships with outside agencies, and on-site supervisors, demonstrating an understanding of systems interactions. (PO 1) 3. Maintain timely and professional clinical paperwork. (SLO 3) 4. Assess and intervene during crisis situations. (SLO 5)
5. Apply family assessment and DSM knowledge to clinical cases. (SLO 5) 6. Demonstrate an ability to build a relevant treatment plan that clearly matches the client's diagnostic assessment. (SLO 5, PO 3)
7. Apply MFT theoretical models to clinical cases. (PO 1, SLO 5) 8. Demonstrate a sensitivity to issues of clients' race, ethnicity, gender, sexual orientation, and disabilities. (PO 3, SLO 4)

MFT 699 Thesis

Coreq.: 1-6 Cr. Fall | Spring | Summer

Mass Communications (MCOM)

MCOM 580 Strategic Cases and Campaigns in Advertising

Case-study analysis of advertising strategies and practices in contemporary society. Students develop a comprehensive advertising campaign for a real-world client.
Coreq.: Cr. Fall | Spring

Student Learning Outcomes

1. Use relevant consumer, market, product and competitive research in an advertising campaign
2. Identify and apply knowledge of market segmentation, target marketing and brand positioning in the advertising process.
3. Analyze and evaluate the role that legacy and digital media play in the advertising process.
4. Implement strategies and techniques for real-world campaigns 5. Apply case-study analysis methodology to various advertising contexts 6. Work effectively as a member of a collaborative team
7. Effectively communicate ideas, analysis and argument through written reports and verbal presentations.

MCOM 585 Strategic Cases and Campaigns in Public Relations

Case-study analysis of public relations strategies and practice in contemporary society. Students develop a comprehensive public relations campaign for a real-world client.
Coreq.: Cr. Fall | Spring

Student Learning Outcomes

1. Use relevant research to develop goals and measure success in a public relations campaign
2. Evaluate communication strategies facing organizations and design customer consumer-focused solutions.
3. Implement public relations strategies and techniques in a real-world campaign 4. Apply case-analysis methodology to various public relations contexts.
5. Work effectively as a member of a collaborative team.
6. Effectively communicate ideas, analysis and argument through written reports and verbal presentations.

MCOM 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MCOM 601 Communication Theory

Theories and research approaches in the study of mass media messages and their impact on audiences.
3 Cr. Fall

MCOM 603 Seminar in Mass Communications (Topical)

Seminar presentations on topics in mass communications (example: new technology or regulation).
Coreq.: 1-3 Cr. DEMAND

MCOM 604 Readings in Mass Communications

A topic in mass communications. Oral and written reporting of readings. May be repeated with a different topic to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

MCOM 605 Ethics and Critical Analysis of Mass Media

Advanced analysis of the values, principles, processes and critical paradigms commonly used for ethical decision making. Critiquing mass mediated culture.
3 Cr. Spring

MCOM 621 Advanced Advertising Theories and Practices

Indepth analysis of major theories and methods of advertising, brand development and agency processes.
3 Cr. Spring

MCOM 625 Seminar: Public Opinion and Communication

Theories in communication, public opinion and attitudinal changes; research findings on communication, opinion and persuasion; methods and methodological problems and application of research methods.
Prereq.: COMM 601 3 Cr. DEMAND

MCOM 630 Seminar in International Mass Communications

Problems and issues involved in global communication. Media freedom. International broadcasting politics of free flow of information. Transnational advertising.
3 Cr. Spring

MCOM 632 Advanced Research Methods in Mass Communication

Methodologies of mass communication research, both quantitative and qualitative. Prior knowledge of basic research methods is required.
3 Cr. Spring

MCOM 633 Qualitative and Critical Research Methods

Advanced critical and qualitative research methodologies.
3 Cr. Fall

MCOM 634 Advanced Public Relations Theories and Practices

Public relations theories, campaign design and evaluation, and ethical considerations.
3 Cr. Spring

MCOM 635 Mass Communication Seminar in Media Convergence

Theoretical and professional issues of media convergence and their impacts on journalistic practices media industries and society.
3 Cr. Fall

MCOM 646 Diversity Issues in Mass Media

Institutional diversity issues, such as major media hiring practices, and content issues, such as stereotyping.
3 Cr. DEMAND

MCOM 652 Strategic Communications Design

Principles and applications of graphic design for television, advertising, PR and related areas of mass communications using digital imaging and design software.
3 Cr. Fall

Student Learning Outcomes

1. Analyze and apply the principles of design in print projects related to advertising, PR and communications in general.
2. Analyze, discuss, and critique design work in terms of aesthetics, effectiveness, appropriateness, usability and accessibility.
3. Describe current conventions, trends, and theories in graphic design, especially in the area of advertising and PR.
4. Use digital image software to create and manipulate digital images and graphics for us in multiple media formats.
5. Create digital advertisements, brochures, and related print design pieces for use in multiple media platforms.
6. Describe current conventions, trends, and theories in Web page design and apply them to the creation of Web page design layouts.

MCOM 670 Public Health Communication

Communication issues, theories, and research in public health.
3 Cr. DEMAND

MCOM 686 Integrated Strategic Communications

Internal and external integration of advertising and public relations with brand building. Real world clients. Capstone.
Prereq.: MCOM 621, MCOM 634, MCOM 652 3 Cr. Spring

Student Learning Outcomes

1. Analyze the conceptual integration of advertising and public relations.
2. Integrate advertising and public relations in strategic communication projects for clients.
3. Analyze and apply the external integration of advertising and public relations with a branding perspective.
4. Build, manage and measure brand equity.

MCOM 690 Selected Topics

May be repeated to a max. of 9 credits.
Coreq.: 2-16 Cr. Fall | Spring | Summer

MCOM 691 Enrollment Continuation

Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr.

MCOM 694 Selected Topics

May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MCOM 695 Temporary Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MCOM 699 Thesis

Coreq.: 1-6 Cr. DEMAND

Master of Public Administration (MPA)

MPA 600 Foundations of Public Administration and Public Service

History and scope of public administration and public service; contemporary issues that confront public administration.
3 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Students will describe the discipline of public administration in terms of how changing political eras have resulted in changes to the discipline.
2. Students will identify and describe changes in organization theory, human resources, and budgeting from the beginning of the professionalization of American public administration to present.
3. Students will explain the policy making process and analyze how the process produces outcomes.
4. Students will explain how and why some policies/programs are successfully implemented and why others are not.
5. Students will describe the key frameworks of public administration as a discipline and how that has influenced public administration as an occupation.
6. Students will assess pitfalls of ethical behavior in the public sector workplace and how to insure these pitfalls are mitigated.
7. Students will describe and assess the core competencies of public administration today.

MPA 601 Public and Nonprofit Organization Theory and Behavior

Theories and practices of public and nonprofit organizations. Emphasis on behaviors, structures, decision making processes, culture
3 Cr. Fall

Student Learning Outcomes

1. Students will assess changes in organizational theory on organizational and individual behavior.
2. Students will explain organizational forces on organizational and individual learning, decision making, communication.
3. Students will evaluate how organizational structures influence management processes, policy making.
4. Students will explain organizational culture and how it influences organizational behaviors.
5. Students will evaluate leadership styles regarding organizational culture.
6. Students will describe organizational change: causes, results.

MPA 602 Public Budgeting and Public Finance

Public budget decision processes; budget structures, methods and formats; revenue sources, structures and forecasts, debt, and administration.
3 Cr. Fall

Student Learning Outcomes

1. Students will explain fundamentals of public finance.
2. Students will evaluate the logic of decision making processes.

3. Students will explain budget structures and reforms and how they meet the goals of 'good budgeting'.
4. Students will identify and explain how each revenue source meets the evaluative criteria of a 'good revenue' sources.
5. Students will be able to explain and use common budget forecasting tools.
6. Students will apply their knowledge of debt administration and fund management in hypothetical budget situations.
7. Students will analyze pension formats for fairness and stability.

MPA 603 Public and Nonprofit Human Resource Management

History and policies of public and nonprofit personnel management and the contemporary tools and techniques employed to select, develop, and sanction organizational human assets.
3 Cr. Spring

Student Learning Outcomes

1. Students will explain the political and administrative values that guide the core functions of public personnel management.
2. Students will apply the political and administrative values to defining and organizing work.
3. Students will apply the political and administrative values to pay and benefit systems.
4. Students will apply the political and administrative values to recruitment, selection and promotion.
5. Students will apply the political and administrative values to performance appraisal.
6. Students will apply the political and administrative values to sanction systems.
7. Students will apply the political and administrative values to employee associations and contractual negotiations.

MPA 604 Leadership in Public and Nonprofit Organizations

Theories and practices of leadership in large and small public and nonprofit organizations.
3 Cr. Fall

Student Learning Outcomes

1. Students will explain and evaluate leadership theories.
2. Students will apply leadership theories to case studies.
3. Students will determine whether leadership skills can be learned/taught.
4. Students will determine whether leadership traits have validity and if so, apply them to case studies.
5. Students will demonstrate the skills and tasks necessary for successful public organization leadership.

MPA 605 Topics in Leading Public and Nonprofit Organizations

Opportunities and challenges (ethics, benchmarking, information management and data practices, advocacy and lobbying, supervision, conflict management, data analysis, public presentation, mediation) facing public and nonprofit leaders. May be repeated with a different topic for a maximum of 3 credits.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Students will critically analyze and apply knowledge of a contemporary issue, e.g., accountability, ethics, organizational culture, decision making tools, to management and leadership of public and nonprofit organizations.
2. Students will apply knowledge of personal, professional and organizational barriers to implementation of contemporary issues of management and leadership to public and nonprofit organizations.
3. Students will explain and demonstrate knowledge of how to access implementation of management and leadership tools and techniques to contemporary issues facing public and nonprofit organizations.

MPA 606 Strategic Management in the Public and Nonprofit Organizations

Examination and application of strategic planning and management techniques.
3 Cr. Spring

Student Learning Outcomes

1. Students will explain the purposes of strategic management.
2. Students will explain public-private differences to strategic management.
3. Students will demonstrate how language and culture enters into strategic management.
4. Students will explain why organizational location influences strategic management.
5. Students will demonstrate strategic management tools: best practices, benchmarking, scorecards.

MPA 607 Program Evaluation and Performance Assessment

Statistical tools and techniques and applications of program evaluation methods to public sector and nonprofit sector policy and managerial issues.
3 Cr. Spring

Student Learning Outcomes

1. Students will explain the purposes of program evaluation.
2. Students will demonstrate how to use various data analytic skills in program evaluation.
3. Students will explain and demonstrate the use of performance measurement and benchmarking.
4. Students will explain and demonstrate the use of experimental designs.
5. Students will explain and demonstrate the use of quasi-experimental designs.
6. Students will explain and demonstrate the use of reflexive designs.
7. Students will explain and demonstrate the use of cost-benefit and cost-effectiveness analysis.

MPA 620 Leadership and Local Government Management

Examination of the executive-council/commission relations, role of manager, structural constraints to management, applicable Minnesota municipal and county laws and political realities of leadership and management of local governments.
3 Cr. Even Fall

Student Learning Outcomes

1. Students will describe the historical development of local governments.
2. Students will analyze the differences between county and municipal governments.
3. Students will describe the role of the professional manager.
4. Students will assess the role of the professional manager compared to constraints on leadership by law and politics.
5. Students will apply applicable Minnesota law, as constraints, on the functionality of the professional manager.

MPA 621 Emerging Issues in Local Government Leadership and Management

Examines emerging issues facing local governments: collaboration, coalition building, citizen engagement, and new governance.
3 Cr. Odd Fall

Student Learning Outcomes

1. Students will define, analyze and evaluate collaborative agreements as tools to improve local government performance.
2. Students will define, analyze and evaluate coalition building as tools to improve local government performance.
3. Students will define, analyze and evaluate citizen participation initiatives as tools to improve local government performance.
4. Students will define and evaluate new governance options as tools to improve local government performance.

MPA 623 Managing Public Works, Regulatory and Human Services in Local Government

Practical challenges in local government management as they pertain to public works, utilities, licenses and regulatory services, and human services (parks and recreation, housing, etc.).
3 Cr. Odd Spring

Student Learning Outcomes

1. Students will identify and describe services and structure for delivery of services typically identified as public works: water treatment, waste water management.
2. Students will identify and describe services and structure for delivery of services typically identified as streets-roads-highways-bridges construction and maintenance.
3. Students will identify and describe services and structure for delivery of services typically identified as solid-waste collection and disposal.
4. Students will identify and describe services and structure for delivery of services typically identified as human and leisure services: library, parks, recreation, housing, public health.
5. Students will identify and describe services and structure for delivery of services typically identified as utilities.
6. Students will identify and describe services and structure for delivery of services typically identified as license and regulatory.

MPA 624 Managing Public Safety in Local Government

Practical challenges in local government management pertaining to judicial services, law enforcement, corrections, fire, and emergency services.
3 Cr. Odd Fall

Student Learning Outcomes
1. Students will describe and explain the various components of public safety units in local government and explain how they interact
2. Students will analyze the various practices and functions of public safety units in local governments.
3. Students will demonstrate how to resolve various challenges and dilemmas of these individual units.

MPA 625 Managing Planning, Zoning, Community and Economic Development in Local Governments

Practical problems of local government management as they pertain to planning, zoning, community development and economic development.
3 Cr. Even Spring

Student Learning Outcomes
1. Students will be able to define, describe and discuss the main historical eras in the field of urban and regional planning and community development within the context of urbanization, urban areas, cities, and communities.
2. Students will be able to explain the connection between and contribution of the various planning fields to the development and management of a city/community.
3. Students will be able to compare and contrast alternative tools and strategies for economic development, transportation, housing, and environmental planning.
4. Students will be able to evaluate and prescribe appropriate actions connected to economic development, housing, land use, environmental, and transportation planning of their specific urban area, city, or community.

MPA 626 Managing Local Government Finances

Practical problems of local government financial management including debt management, pension fund management, capital improvement, idle fund investment, accounting practices and financial management specific to local governments.
3 Cr. Even Spring

Student Learning Outcomes
1. Students will discuss the contexts (historical, political, economical) of local government budgeting.
2. Students will identify the stages of budget building, preparation and execution.
3. Students will apply revenue estimation methodologies.
4. Students will apply cost estimation and comparison methodologies.
5. Students will define and use performance indicators in local government budgeting.
6. Students will identify and explain capital and debt management methodologies.
7. Students will describe and assess accounting principles and practices.
8. Students will describe pension fund management policies and practices.
9. Students will describe and explain financial reporting practices.
10. Students will describe and explain idle fund management policies and practices.

MPA 630 Foundations of Nonprofit Organization Administration

Examines the philosophical underpinnings, concepts and principles of nonprofit organizations, emphasizing history, philosophical foundations and influences of government policies on operations and internal governance.
3 Cr. Even Fall

Student Learning Outcomes
1. Students will describe the scope, dynamics, values and contributions of nonprofit organizations.
2. Students will describe and evaluate funding bases: grants, volunteers, contracts, commercial enterprises to NPOs.
3. Students will assess the economic, social and community realities that nonprofit organizations face.
4. Students will describe and evaluate new service realities with coalitions of providers.
5. Students will identify and evaluate governing and leadership capabilities and capacities.
6. Students will explain the importance of volunteers and how they contribute to a nonprofit organization's successes.

MPA 631 The Executive Director

Examines to role of the executive director in terms of creating and maintaining effective organizational culture, values, vision, internal and external relationships, board-staff relations and transitions.
3 Cr. Odd Spring

Student Learning Outcomes
1. Students will describe the job of the nonprofit organization executive director.
2. Students will describe, explain and assess the differences between public, private profit and

nonprofit leadership.
3. Students will evaluate the executive director's job in maintaining the nonprofit organization's vision, values and culture.
4. Students will explain the job of the executive director to ensure organizational effectiveness and financial security.
5. Students will evaluate the executive director's response to internal and external forces.
6. Students will explain the unique relationship executive director's have with the board and how it influences organizational successes.
7. Students will explain why the executive director must insure organizational effectiveness and financial security.

MPA 632 Nonprofit Revenue Leadership and Management

Examines philanthropic philosophy and practice of giving to nonprofit service organizations and foundations, use of volunteers, fundraising, service delivery contracts and user fees as resources for nonprofit organizations.
3 Cr. Even Fall

Student Learning Outcomes

1. Students will evaluate the philosophy of philanthropic outreach.
2. Students will analyze methods to identify potential volunteers and recruitment strategies.
3. Students will describe training and use of volunteers.
4. Students will explain the requirements nonprofit organizations have to serve volunteers ethically and to account for the time and effort.
5. Students will describe and evaluate structures of fundraising, identification of donors, solicitation, and management of fundraising efforts.
6. Students will evaluate use of government contracts for delivered services from perspective of obtaining contracts, maintenance of contracts and whether contracts for services are worth the effort.
7. Students will assess fees for services for cost, price, and accountability.

MPA 633 Partnerships, Innovation and Change

Examines reasons and methods of building and maintaining partnerships as a necessity to serve clientele base, requirements and conditions for innovation and change.
3 Cr. Odd Spring

Student Learning Outcomes

1. Students will describe "new nonprofit management".
2. Students will analyze types of partnerships for opportunities and pitfalls to an organization's baseline operations.
3. Students will describe the mechanisms of obtaining and maintain partnerships.
4. Students will demonstrate accounting of expenditures and service delivery.
5. Students will explain the conditions necessary for organizational innovation and change.
6. Students will explain the impacts on an organization seeking innovative solutions to existing problems.
7. Students will describe how to build internal conditions that embrace constant change.

MPA 634 Nonprofit Financial Management

Debt management, pension fund management, capital improvement, idle fund investment, accounting practices specific to nonprofit organizations including accounting for volunteers and donations and remaining in nonprofit compliance.
3 Cr. Odd Fall

Student Learning Outcomes

1. Students will explain importance and purposes of non profit organization budgets.
2. Students will demonstrate ability to construct program, organization wide, capital, cash flow budgets.
3. Students will explain types/sources of funds: unrestricted, contract, grant, business income, asset generated, contributions and pledges, in-kind and how they are budgets.
4. Students will demonstrate determination and estimation of income, expenses by type of each (grants, etc.) and personnel, etc.
5. Student will explain fundamentals of cash flows.
6. Students will demonstrate their understanding of cash flows.
7. Students will demonstrate their knowledge of financial monitoring and reporting with construction of financial management report and show how modification, projections are made and explained.

MPA 640 Topics in Public and Nonprofit Management and Leadership

Special topics of public and nonprofit management and leadership.
3 Cr. DEMAND

Student Learning Outcomes

1. Students will analyze critically and apply knowledge of complex issues, for example organizational accountability, organizational ethics, cultural change.
2. Students will analyze critically and apply knowledge of complex issues, for example individual accountability, individual ethics, individual cultural change.
3. Students will assess how organizations may need to change to respond to a requirement to create an organizational environment needed to embrace emerging issues such as accountability, ethical behavior, cultural change.
4. Students will assess how organizations may need to change its environment to create a pathway for individuals to embrace and lead change regarding such emerging issues such as individual accountability, ethical behavior, cultural change.
5. Students will describe the frameworks needed to assess successes and failures of an organization attempt to change its working environment to respond to organizational and individual adjustments to emerging issues such as accountability, ethics, cultural change.

MPA 644 Internship in Public and Nonprofit Organization

Supervised training opportunity in a government agency or nonprofit organization. May be repeated to a maximum of 2 credits.
Coreq.: 1-2 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Consistent with NASPAA's (MPA accreditation agency) universal competencies, students will analyze, evaluate, and apply administrative rules and laws to new and existing managerial and policy situations.
2. Consistent with NASPAA's (MPA accreditation agency) universal competencies, students will evaluate the impact of rules and laws on agencies, clientele, and the private sector.
3. Consistent with NASPAA's universal competencies, students will analyze, evaluate, and apply administrative rules and laws to new and existing managerial and policy situations.
4. Consistent with NASPAA's (MPA accreditation agency) universal competencies, students will demonstrate an understanding of theories of policy making and program evaluation by comparing and contrasting policies and programs and utilizing applicable methods to evaluate policies and programs.
5. Consistent with NASPAA's (MPA accreditation agency) universal competencies, students will demonstrate an understanding of human resource and organizational management theories by explaining how theories of management apply.
6. Consistent with NASPAA's (MPA accreditation agency) universal competencies, students will demonstrate an understanding and appreciation of the role that ethics play in an administrative setting by managing ethics dilemmas that show conflicts between concepts like equity, efficiency, effectiveness, and the democratic ethos.
7. Consistent with NASPAA's (MPA accreditation agency) universal competencies, students will engage in scholarship and research, and present materials professionally.

MPA 650 Politics of Developing Societies.

Analysis of political, social, and economic systems in developing countries with a focus on bureaucratic structures and the challenges of policy-making in less developed countries.
3 Cr. Even Fall

Student Learning Outcomes

1. Analyze the relationship between economic development, social development, and political development.
2. Analyze and synthesize the differences between politics in developed and developing countries.
3. Identify and describe the dynamics of weak and failed states.
4. Identify and describe theories of development and underdevelopment.

MPA 651 Development Administration

Examines the problems and issues associated with the management and administration of development programs and projects in less developed countries.
3 Cr. Odd Spring

Student Learning Outcomes

1. Students will analyze societal environments, development planning, and projects.
2. Students will examine and synthesize the various aspects of development administration and development management.
3. Students will identify and analyze problems and issues associated with management and administration of development programs and projects.

4. Students will analyze local and international environmental changes and their impacts on development administration and program.
5. Students will evaluate management performance.

MPA 654 Theories of Development

Examines the major theories of economic, social, and political development, and the impact of these theories on development policies in less developed countries.
3 Cr. Even Fall

Student Learning Outcomes

1. Students will identify and describe the differences between economic, social, and political development.
2. Students will analyze the relationships between economic, social, and political development.
3. Students will identify different development paradigms and their main theories.
4. Students will compare and contrast the different development paradigms.

MPA 655 International Organizations and Development

Examines the of role international governmental actors (IMF, World Bank, WTO, UN) and non-governmental actors (transnational civil society) play in development in less developed countries.
3 Cr. Odd Spring

Student Learning Outcomes

1. Students will critically analyze the role played by international organizations in promoting economic development in less developed countries.
2. Students will critically analyze the role played by international organizations in promoting good governance and nation building in less developed countries.
3. Students will analyze the kinds of linkages that exist between international governmental organizations and states in less developed countries.

MPA 656 Non-Governmental Organizations and Development:

Examines the role and impact that non-governmental and non-profit organizations have played in political, social, and economic development in less developed countries, with a focus on state-society relations and building organizational capacity.
3 Cr. Odd Fall

Student Learning Outcomes

1. Students will analyze environmental settings and program development.
2. Students will examine organizational design and key managerial mechanisms.
3. Students will analyze local and international changes and organizational adaptation.
4. Students will describe management of financial resources in the developing world organizations.
5. Students will describe organizational methods of managing people.
6. Students will evaluate organizational impacts.

MPA 657 Corruption in Less Developed Countries

Examines the causes of corruption, the impact of corruption on political, social, and economic development in less developed countries, and strategies for minimizing corruption.
3 Cr. Even Spring

Student Learning Outcomes

1. Students will analyze the context and institutions of corruption.
2. Students will define and analyze the types of corruption.
3. Students will identify and analyze sources of political corruption in less developed countries.
4. Students will evaluate the impacts of corruption on social, cultural, economic, and political settings.
5. Students will identify and assess institutional strategies to minimize corruption.

MPA 658 Topics in Leading International Development

Examines special topical opportunities and challenges (water resources, public health, environmental policies, disaster relief policies, tourism planning and policy) facing international development servant leaders. May be repeated for maximum of 6 credits.
3 Cr. Odd Fall

Student Learning Outcomes

1. Students will demonstrate knowledge of emerging issues (such as environmental, sustainable development, disaster relief) related to developing societies.
2. Students will explain the role and impact of the many institutions (profit, governmental, nonprofit) that influence the success and failure of policymaking and implementation of programs designed to respond to emerging issues in developing societies.

3. Students will be able to describe and explain the historical evolution and impact of programs and policies designed to respond to emerging issues in the developing world.
4. Students will be able to articulate and have an understanding of how programs relating to emerging issues in the developing world are being dealt with globally.

MPA 660 Health Policies and Regulations

Policy processes and outcomes. Long-term care regulatory policies ant heir impact on skilled nursing facilities administration.
3 Cr. Odd Spring

Student Learning Outcomes

1. Students will analyze the role of policy decision makers in formulation, adoption and evaluation of policies.
2. Students will evaluate impacts of regulations of client care in long term care facilities.
3. Students will evaluate quality of care in long-term care facilities within the parameters of regulations.
4. Students will synthesize an innovative approach to enhancing resident quality of life in spite of regulatory constraints.

MPA 690 Public and Nonprofit Administration Capstone Researc

Research and writing a major paper required for completion of the degree.
1 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Students will evaluate sources.
2. Students will document sources.
3. Students will apply qualitative research strategies.
4. Students will integrate sources into writing.

Master of Business Administration (MBA)

MBA 501 Credit By Arrangement

Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MBA 588 Type B Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time or program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MBA 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MBA 601 MBA Ignite

Foundational course for the MBA program.
3 Cr. Fall | Spring

Student Learning Outcomes

1. Discuss Foundations of Accounting.
2. Elaborate Foundations of Finance.
3. Summarize Foundations of Marketing.
4. Appraise Foundations of Operations.
5. Explain Foundations of IS.
6. Support Foundations of Economics.
7. Apply Professional Tools.

MBA 605 Business Topics

Selected topics related to contemporary business issues. May be repeated with different topics up to a maximum of 6 credits.
Coreq.: 1-6 Cr. DEMAND

MBA 632 Management Support Systems

Topics in technology supported business decision making, reengineering, and related management strategies. Management support technologies, modeling and decision making techniques.
Prereq.: BCIS 340 3 Cr. Fall

MBA 633 Topics in Management Information

Recent developments in concepts, theory, practices in the analysis and design of management information systems.
Prereq.: BCIS 340 Coreq.: 1-3 Cr. DEMAND

MBA 635 Management of Technology

Public policy, product development, and managing innovation.
Prereq.: BCIS 340 3 Cr. DEMAND

MBA 640 Advanced Information Security Management

Advanced analysis of log files, hacking methods and attack sources. Planning comprehensive logging

strategies. Using log data to improve the computer security plan. Problems of recruiting and retaining security personnel.
Prereq.: BCIS 350 3 Cr. DEMAND

MBA 644 Internship
Participation in a full time paid position with an approved cooperating business, governmental, or civic organization. A maximum of 3 credits may apply as electives. Permission of MBA Director required.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MBA 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MBA 691 Selected Topics
May be repeated to a maximum of 9 credits.
Coreq.: 1-3 Cr. DEMAND

MBA 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MBA 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MBA 696 Capstone Project
Strategic management theory and processes in action with real businesses and not-for-profit organizations. Open to graduating MBA students only.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Synthesize strategic management theory, strategic management processes, core course content, and skills from the MBA program to assess a real-world situation and formulate/refine the key issue using knowledge, skills, and values (know, do, be) developed in the MBA program.
2. Evaluate competing alternatives considering multiple viewpoints including multi-disciplinary, ethical, and global perspectives.
3. Determine a strategically-sound and ethically-defensible resolution to the issue.
4. Create, compare, present, and defend an ethical, strategic business plan for a real-world enterprise assignment.
5. Self-assess personal communication, decision-making, and leadership.

MBA 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Material Science and Instrumentation (MATS)

MATS 411 Introduction to Material Science and Nanotechnology
Structure of materials, chemical composition, phase transformations, lattice vibrations, defects and dislocations, mechanical, electrical, thermal, magnetic and optical properties of metals, ceramics, polymers and other materials. Theoretical and application of nanostructured materials, nanomechanics, nanoelectronics, and nano-magnetism.
Prereq.: C or better (not C-) CHEM 211; PHYS 235; MATH 222 3 Cr. Fall

MATS 412 Solid State Materials
Application of theoretical principles of solids including; metals, semiconductors, insulators, magnetic, crystalline and amorphous solids, physical, chemical, and electronic properties, and interdependence of atomic and molecular arrangements.
Prereq.: C or better (not C-) in MATS 411 or MATS 511 3 Cr. Spring

MATS 414 Polymeric and Composite Materials
Chemical, physical, mechanical and interfacial properties of a diverse range of materials: polymers, metals, glasses and ceramics. Impact of structure and composition of materials on the fabrication, rheology and processing of materials and its correlation to its properties mentioned above.
Prereq.: C or better (not C-) MATS 411 or MATS 511, MATH 311 3 Cr. Spring

MATS 511 Introduction to Material Science and Nanotechnology
Structure of materials, chemical composition, phase transformations, lattice vibrations, defects and dislocations, mechanical, electrical, thermal, magnetic and optical properties of metals, ceramics, polymers and other materials. Theoretical and

application of nanostructured materials, nanomechanics, nanoelectronics, and nano-magnetism.
Prereq.: C or better (not C-) CHEM 211; PHYS 235; MATH 222 3 Cr. Fall

MATS 512 Solid State Materials
Application of theoretical principles of solids including; metals, semiconductors, insulators, magnetic, crystalline and amorphous solids, physical, chemical, and electronic properties, and interdependence of atomic and molecular arrangements.
Prereq.: C or better (not C-) in MATS 411 or MATS 511 3 Cr. Spring

MATS 514 Polymeric and Composite Materials
Chemical, physical, mechanical and interfacial properties of a diverse range of materials: polymers, metals, glasses and ceramics. Impact of structure and composition of materials on the fabrication, rheology and processing of materials and its correlation to its properties mentioned above.
Prereq.: C or better (not C-) MATS 411 or MATS 511, MATH 311 3 Cr. Spring

MATS 615 Polymeric and Composite Materials Laboratory
Synthesis, structure-properties relationships, processing and fabrication of diverse range of materials are explored through a series of hands-on experiments. Experiments dealing with materials processing technology, mechanical, rheological and environmental characterization of materials. Lab.
Prereq.: Prereq.: C or better (not C-) MATS 411 or MATS 511, MATS 414 or MATS 514 or concurrent registration; MATH 311 2 Cr. Spring

MATS 621 Materials Characterization Techniques
Macrostructure and Microstructure of bulk and surface properties, interactions, material types, and modeling. Methods of materials characterization including microstructural analysis, microchemical characterization, and scanning probe microscopy techniques.
Prereq.: C or better (not C-) in MATS 411 or MATS 511 3 Cr. Fall

MATS 623 Bulk Materials Characterization Techniques Laboratory
Application and identification of bulk and surface structure, macrostructural, and microstructural analysis of metals, metal oxides, and mixed-materials using microstructural analysis, microchemical characterization, and scanning probe microscopy techniques. Lab.
Prereq.: C or better (not C-) in MATS 411 or MATS 511, MATS 621 or concurrent registration 2 Cr. Spring

MATS 625 Surfaces and Thin Films Characterization Techniques Laboratory
Application and identification of surface structure, adsorbates, impurities, defects, and surface reactivity on single crystals, thin films, and amphorous solids of metals, metal oxides, and mixed-materials using ultra-high vacuum techniques for surface microstructural analysis, microchemical characterization. Lab.
Prereq.: C or better (not C-) in MATS 411 or MATS 511, MATS 621, MATS 641 or concurrent registration 2 Cr. Spring

MATS 631 Electronic and Optical Materials
Theories and applications of electronic and optical materials including topics such as semiconductor devices. linear dielectric materials, ferroelectrics, piezoelectrics, and pyroelectrics, classical propagation, interband absorption, excitons, luminescence, molecular materials, liquid crystals, and nonlinear optics.
Prereq.: C or better (not C-) in MATS 411 or MATS 511 and MATS 412 or MATS 512 3 Cr. Fall

MATS 641 Surfaces, Thin Films, and Vacuum Techniques
Theoretical and experimental application of static and dynamic behavior of clean and adsorbate-covered solid surfaces, thin films, and interfaces related to surface structure, adsorbates, impurities, defects, and surface reactivity using ultra-high vacuum techniques for surface microstructural analysis.
Prereq.: C or better (not C-) in MATS 411 or MATS 511, MATS 621, MATS 625 or concurrent registration 3 Cr. Spring

MATS 695 Capstone Experience
Culminating project. Student will develop, perform, and report (in written and oral format) on an individual project related to content of the program courses. An alternative project is a research paper demonstrating proficiency and integration of at least 3 courses, demonstrating knowledge and critical thinking skills.

Prereq.: C or better (not C-) in MATS 411 or MATS 511 3 Cr. Fall | Spring | Summer

Mathematics (MATH)

MATH 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MATH 511 Modern Algebra I
Groups, subgroups, cyclic groups, permutation groups, isomorphisms, Cayley's theorem, cosets, LaGrange's theorem, normal subgroups, quotient groups, homomorphisms, the first isomorphism theorem, construction of the integers and rational numbers from the natural numbers, rings, integral domains, and fields.
Prereq.: MATH 304 and MATH 312, or consent of instructor 4 Cr. Fall

MATH 512 Modern Algebra II
Ideals, factor rings, ring homomorphisms, polynomial rings, factorization of polynomials, irreducible polynomials, Euclidean domains, introduction to fields, extension fields, splitting fields, algebraic and transcendental numbers, geometric construction.
Prereq.: MATH 411 3 Cr. DEMAND

MATH 521 Real Analysis I
The real number system, completeness of the real numbers, topology of the real numbers, sequences, limits, continuity, differentiation, and integration.
Prereq.: MATH 222, MATH 304 Coreq.: 4.0 Cr. Spring

MATH 522 Introduction to Real Analysis II
Series, power series, uniform and pointwise convergence, Reimann integration, and applications.
Prereq.: MATH 421, MATH 521 3 Cr. DEMAND

MATH 523 Complex Variables
The complex field, the theory of analytic functions, power series. Fundamental theorem of algebra.
Prereq.: 320 or 321. 3 Cr. S, ODD.
Prereq.: MATH 320 or MATH 321 3 Cr. Odd Spring

MATH 527 Partial Differential Equations
Partial differential equations of mathematical physics, boundary value problems, classical solution methods, Bessel functions.
Prereq.: MATH 320 or MATH 321, MATH 325 or MATH 327 3 Cr. Odd Fall

MATH 531 Professional Subject Matter for Middle Grades Mathematics
For teacher candidates only. Number sense, patterns and functions, number theory, geometry, data analysis and probability, current curriculum and pedagogical developments, lesson planning, and microteaching. Should be taken within one year prior to student teaching.
Prereq.: Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission, and one of MATH 304, MATH 312, MATH 321, or MATH 325 Coreq.: STEM 520, ED 531, IM 522 3 Cr. Fall

MATH 532 Professional Subject Matter for Secondary School Mathematics
For teacher candidates only. Algebra, geometry, data analysis, and advanced topics; current curriculum and pedagogical developments, lesson planning, and macroteaching. Should be taken within one year prior to student teaching.
Prereq.: Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission, and one 400-level mathematics course.
Coreq.: STEM 521, ED 551, ED 521 4 Cr. Spring

MATH 533 Algebra for Elementary and Middle School Teachers
Algebraic concepts, representations, structures and applications.
Prereq.: MATH 330 3 Cr. DEMAND

MATH 535 Teaching Problem Solving in Elementary School Mathematics
Problem solving strategies, teaching problem solving, problem solving via concrete materials, cooperative learning. For elementary education majors only.
Prereq.: MATH 330 3 Cr. DEMAND

MATH 539 Using Technology to Teach Science and Mathematics, K-8.
Demonstrating and exploring technology, such as computers and calculators, that enhances mathematics and science learning and instruction in the K-8 curriculum.
Prereq.: MATH 330 3 Cr. DEMAND

MATH 552 Numerical Analysis
Round-off error and computer arithmetic. Solutions of equations in one variable. Interpolation and polynomial approximation. Numerical integration

and differentiation. Error analysis.
Prereq.: MATH 222, MATH 252 or permission of instructor 3 Cr. Even Spring

MATH 553 Numerical Linear Algebra
Direct and iterative solutions in linear algebra. Orthogonal polynomials, splines and least squares approximations. Error analysis.
Prereq.: MATH 222, MATH 312, MATH 252 or CSCI 201 3 Cr. DEMAND

MATH 565 Elements of Geometry
Axiomatic systems, foundations of Euclidean geometry, plane Euclidean geometry, and non-Euclidean and transformational geometries.
Prereq.: High school geometry, MATH 304, MATH 312 3 Cr. Spring

MATH 580 Topics in Mathematics
Designed for intensive study in a special topic in pure or applied mathematics. Topic will be announced in class schedule. Approval of instructor required for enrollment. May be repeated to maximum of 6 credits.
3 Cr.

MATH 582 Student Teaching Seminar
For teacher candidates only. Reflections of and extensions of the student teaching experience in a seminar format; individual classroom observations. Must be taken concurrently with student teaching. S/U grading option only.
2 Cr. Fall | Spring

MATH 583 Topics in Elementary School Mathematics
In depth study of a special topic in mathematics relevant to the elementary school curriculum.
Prereq.: MATH 330 3 Cr. DEMAND

MATH 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MATH 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MATH 610 Advanced Engineering Mathematics
Ordinary differential equations, series solutions, transforms, boundary value problems, vector calculus, partial differential equations.
Prereq.: MATH 311, MATH 321, MATH 325 3 Cr. Fall

MATH 630 Topics in Mathematics Education
In-depth study of a special topic in mathematics education: topic to be announced in class schedule.
Coreq.: 1-3 Cr. DEMAND

MATH 631 Teaching Mathematics in the Junior High School
Selected topics including: current curriculum and pedagogical developments; mathematics content, materials, and approaches; assessment, remediation, research.
3 Cr. DEMAND

MATH 632 Teaching Mathematics in the Secondary School
Selected topics including: mathematical perspectives and processes; mathematics content, materials, and approaches; assessment and remediation; research.
3 Cr. DEMAND

MATH 633 Research Implications for Mathematics Learning and Teaching
Implications for classroom practice of current and past research on mathematics learning and teaching at the middle and secondary school levels. How students learn specific mathematical content within the context of mathematical learning theory.
3 Cr. DEMAND

MATH 634 Teaching Geometry in the Secondary School
Historical development, current issues and trends, curricular reform movements, experimental programs, research findings.
3 Cr. DEMAND

MATH 635 Teaching Algebra in the Secondar School
Historical development, current issues and trends, pedagogical issues, role of technology, special topics, experimental programs, assessment and research

findings.
3 Cr. DEMAND

MATH 636 Calculus for Secondary Teachers
Advanced treatment of calculus concepts, including limits, the d erivative, the integral, sequences, and series. Applications of calculus to real world problems.
3 Cr. DEMAND

MATH 660 Number Theory
Prime and composite integers. Diophantine analysis, number congruences, quadratic residues.
Prereq.: MATH 561 3 Cr. DEMAND

MATH 661 Contemporary Geometry
Geometric transformations on the Euclidean plane and in higher dimensions, axiomatic and analytic projective geometry, projective transformations, topological transformations, topology of surfaces and Euler's formula.
Prereq.: MATH 312, MATH 561 3 Cr. DEMAND

MATH 662 History of Mathematics
Historical survey of the development of mathematics.
Prereq.: MATH 221 3 Cr. DEMAND

MATH 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MATH 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

MATH 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MATH 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MATH 699 Master's Thesis

Coreq.: 1-6 Cr. DEMAND

Mathematics Education (MTHE)

MTHE 541 Teaching Calculus in the Secondary School
Fundamental concepts of calculus aligned with methods of teaching and learning those concepts. Emphasizing the role of discovery method through real-world applications of calculus. Use of technology to develop calculus concepts. Calculus concepts through various forms of proof.
3 Cr. Odd Fall

Student Learning Outcomes
1. identify the roots of calculus in algebra and geometry, and how calculus was invented; 2. apply concepts of calculus to solve problems in physics, natural sciences, and economics; 3. identify the theory behind calculus, through which, they will be exposed to the most rigorous and accurate human endeavor; 4. practice how to motivate high school students through real-world problems; 5. analyze the development of calculus concepts through word problems and the use of technology; 6. identify the role of empirical approach toward conjecture, counterexample, and proof; 7. discuss different aspects of proof: logical/symbolic, computer, and picture.

Mechanical and Manufacturing Engineering (MME)

MME 501 Credit by Arrangement
Credit by arrangement.
Coreq.: 1-3 Cr. DEMAND

MME 504 Introduction to Computational Fluid Dynamics
Fluid flow and heat transfer; Boundary conditions; Turbulence; Finite Volume and Finite Difference methods and other methods; Algorithms; Commercial software. Technical elective.
Prereq.: MATH 311, MME 223, MME 302, PHYS 346
3 Cr. Even Spring

Student Learning Outcomes
1. Explain the fundamental theory of CFD.
2. Explain and contrast basic CFD methods.
3. Apply CFD to fluid flow and heat transfer.

4. Formulate and solve problems using basic algorithms to solve basic fluid and heat transfer problems.
5. Formulate and solve problems using commercial CFD software.

MME 511 Mechanical Behavior of Materials
Processing and property relationships in metals, polymers, and/or ceramics; implications to mechanical design including yield, failure, life prediction, and/or fracture; dislocation theory; yield surfaces; creep; composites; new materials.
Prereq.: MME 330 or MME 331, MME 340, MATH 311 or PHYS 346 3 Cr. Odd Fall

MME 520 Finite Element Method
Linear finite element methods including shape functions, stiffness matrix, trusses, beams, and isoparametric elements. Applications to stress analysis and heat transfer with comparisons to other methods. Technical elective.
Prereq.: MATH 311, MATH 312, MME 340, PHYS 346
Coreq.: MME 302 3 Cr. Odd Spring

MME 530 Metrology and Precision Manufacturing
Theories of tolerancing, gauging, error assessment and calibration, interferometry, precision sensing, applications to the design and monitoring of precision machinery. Technical elective.
Prereq.: MATH 311, MME 330, MME 331, MME 340, PHYS 346 3 Cr. Even Fall

MME 540 Solid Mechanics
Elasticity, energy methods, torsion of noncircular cross sections, nonsymmetrical bending, thin-walled beams, curved beams, plates, fatigue and fracture, and composites. Technical elective.
Prereq.: MATH 325, MME 340 3 Cr. Odd Spring

MME 542 Dynamics II
Three dimensional kinematics and kinetics of rigid bodies, gyroscopic motion, multi-body systems, Lagrange's equations. Technical elective.
Prereq.: MME 242 3 Cr. Odd Fall

MME 550 Industrial Robots
Robot design, capabilities, economics, and interfacing. Forward and inverse arm solutions, Jacobian, control algorithms. Control hierachy and languages. Technical elective.
Prereq.: MME 351; MATH 311 or PHYS 346 3 Cr. Even Spring

MME 562 Production Planning/Control
Production systems, forecasting and time series analysis, inventory systems, capacity and material requirements planning, project planning and operations scheduling, job sequencing. Batch and discrete-parts production. MRPII and JIT and CIM.
Prereq.: MME 330 or MME 331 3 Cr. Spring

MME 564 Process and Tool Design
Manufacturing methods and product design at a competitive price. Methods of processing. Part design representation. Computer-Aided Process Planning (CAPP). Machine tool design: precision, drives and economy. Cutting and forming tool materials, sharpening, and standards. Design of jigs, fixtures, and pressworking tools.
Prereq.: MME 330, MME 340, MME 360 3 Cr. Fall

MME 570 Facilities Planning/Materials Handling
Work analysis, process design, and material flow analysis. Facility layout and material handling systems design using systems engineering approach. Stochastic process analysis and simulation techniques. Projects.
Prereq.: MME 330, MME 340, STAT 353 3 Cr. Spring

MME 588 Television
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. DEMAND

MME 590 Mechanical Engineering Topics
Emerging manufacturing methods, experiments, materials, design methods, thermal science issues, or processes applicable to manufacturing or mechanical engineering. Technical elective.
Coreq.: 1-3 Cr. DEMAND

MME 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MME 601 Advanced Heat Transfer

Conduction, convection, and thermal radiation principals applied to multi-mode problems, mass transfer, analytical and numerical techniques, applications to heat-exchangers, thermal stresses, manufacturing.
Prereq.: MME 400 or equivalent, MATH 610 3 Cr. Spring

MME 620 Advanced Finite Element Method
Energy methods, multidimensional, large deformation, and/or nonlinear problems. Applications to plates, shells, vibrations, thermal sciences, and/or manufacturing processes. Boundary elements. Recent developments. Elective.
Prereq.: MME 420, MATH 610 3 Cr. DEMAND

MME 630 Advanced Manufacturing Processes
Non-traditional manufacturing processes including MEMS/NANO manufacturing, EDM/ECM, laser materials processing and rapid prototyping.
Prereq.: MME 330, MME 400 3 Cr. Spring

MME 640 Elastic and Plastic Behavior of Materials
Torsion, beams, cylinders and spheres, disks, the semi-infinite problem, notched members, and cyclic loading.
Prereq.: MME 340, MATH 610 3 Cr. Spring

MME 650 Advanced Control of Mechanical Systems
Multi-input, multi-output mechanical systems, state space representation, controller methods, analysis, and design.
Prereq.: MME 351 3 Cr. Fall

MME 680 Special Topics
Emerging manufacturing methods, experiments, materials, design methods, thermal issues, management techniques, or processes applicable to mechanical engineering or engineering management.
Coreq.: 1-6 Cr. DEMAND

MME 681 Seminar
Research and/or application of methods, models, or experiments in mechanical engineering, manufacturing engineering, or engineering management.
Coreq.: 1-6 Cr. DEMAND

MME 690 Selected Topics
May be repeated to a maximum of 9 credits.
Coreq.: 1-3 Cr. DEMAND

MME 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

MME 694 Selected Topics
May be repeated to a maximum of 9 credits.
Coreq.: 1-3 Cr. DEMAND

MME 695 Workshop
Specific subjects selected to meet special educational needs, offered in a format different from the typical scheduled course. Exact nature of the course will be defined by the department.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MME 697 Independent Study
Independent study of topics in mechanical engineering, manufacturing engineering, or engineering management.
Coreq.: 1-3 Cr. DEMAND

MME 699 Master's Thesis
Master's thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Medical Technology Quality (MTQ)

MTQ 620 Medical Device Quality and Regulatory Fundamentals
Medical device and quality regulatory requirements for both FDA and international regulations and standards.
3 Cr. DEMAND

Student Learning Outcomes

1. Explain the history and purpose of medical technology regulations and standards.
2. Apply the basic quality concepts, tools, and methods used to meet medical device requirements.
3. Analyze and identify the differences, similarities, and interdependencies between regulations and standards applicable to medical devices.
4. Determine the interactions between quality professionals and regulatory bodies.
5. Formulate how compliance provides business value.

MTQ 622 Quality Engineering

Tools and applications for the design and manufacturing of quality medical devices, application of predictive statistics for sampling, statistical process control, and how to address multiple variables through design of experiments.
3 Cr. DEMAND

Student Learning Outcomes

1. Apply modern concepts of Quality Engineering and experimental design.
2. Create and apply Statistical Process Control charts, calculate process capability , and control limits.
3. Summarize and apply the stages of a Six Sigma improvement; Define, Measure, Analyze, Improve, and Control (DMAIC) and design process; Identify, Design, Optimize, & Verify (IDOV).
4. Determine appropriate sample sizes based on desired product or process confidence and reliability.
5. Design, conduct, and analyze experiments in order to quantify and control key variables and improve quality.
6. Select and use software tools for use in quality data analysis.

MTQ 624 Risk Management

Risk management in the development and use of medical devices. Standards, regulations, methods, and tools for identifying, analyzing, and controlling risks and hazards.
3 Cr. DEMAND

Student Learning Outcomes

1. Integrate the role of Risk Management in the Medical Device industry 2. Judge medical device hazards and estimate the probability that harm might ocur 3. Assess the severity of harm and evaluate the associated risks 4. Mitigate risks and monitor the effectiveness of the controls put in place 5. Continually evaluate the changes in risk as design evolves and the medical device gets used

MTQ 626 Medical Technology Quality Systems

Application, management responsibilities, and planning concepts of Quality management systems. US and international standard requirements, and current document control processes in the development, manufacture and distribution of medical devices.
3 Cr. DEMAND

Student Learning Outcomes

1. Apply Quality Systems Management 2. Apply specific US and International standards and regulations 3. Determine Management Responsibility in a Quality System 4. Correctly apply Internal Audit processes and requirements 5. Design and apply Records, Documents and Change Control systems 6. Develop content and implement Quality Sytems Manuals 7. Summarize Corrective and Preventive Action (CAPA) Processes

MTQ 628 Design Control and Product Development

FDA and ISO design control requirements for medtech product development, translation of user needs into product design, risk management in the design process, and how design reviews and a phased approach assure designs are safe, robust, and effective.
4 Cr. DEMAND

Student Learning Outcomes

1. Apply ISO and FDA requirements for design control of medical devices 2. Integrate risk management into the design process 3. Manage the integration of user needs, design input, design output, design verification, design validation, and design review in the product development process 4. Demonstrate concepts of design control through completion of a mock product development project. 5. Define methods for Qualification of Test Methods

MTQ 630 Design Verification, Validation, and Clinical Evaluation

Design verification, design validation, and clinical studies using FDA Quality System Regulations and ISO 13485 requirements. Risk management, statistical sampling, and technical reporting.
3 Cr. DEMAND

Student Learning Outcomes

1. Evaluate & apply FDA Quality Systems Regulations; CFR-Part 820, and ISO-13485 requirements for design control of medical devices, with focus on design verification, design validation & clinical studies 2. Distinguish how risk management fits into the design process 3. Judge the relationship of user needs, design input and design output with respect to design verification, design validation & clinical studies

MTQ 632 Manufacturing Process Development and Validation

Quality tools to validate that a manufacturing process is well characterized, tested, capable, and controlled to demonstrate compliance and control risks and costs. Using designed experiments. Determining sample size and protocal, report writing, and validation.
3 Cr. DEMAND

Student Learning Outcomes
1. Define a manufacturing process 2. Assess process risk (PFMEA) & its impact on product performance & design 3. Design experimentation to characterize and optimize a manufacturing process 4. Determine the appropriate sample size for experimentation, qualification, validation, and on-going process control and monitoring 5. Evaluate how to determine and influence process capability 6. Write a compliant protocol and report and a master validation plan and report 7. Define and apply process and software validation principles of Installation, Operational, Performance, and Product Performance Qualification (IQ, OQ, PQ, and PPQ) 8. Determine revalidation requirements

MTQ 634 Corrective Action and Preventative Action (CAPA)
Methodologies to prevent product failures, anticipate potential problems, and correct them. Continuous quality improvement.
3 Cr. DEMAND

Student Learning Outcomes
1. Define what CAPA is 2. Evaluate approaches for how to monitor and prevent product failures 3. Effectively manage product quality corrective actions 4. Manage and effectively lead CAPA teams 5. Manage customer complaints while meeting regulatory requirements

MTQ 636 Process Control and Monitoring
Maintaining process capability and output quality through statistically-based process plans.
3 Cr. DEMAND

Student Learning Outcomes
1. Apply Process Control methods 2. Use Statistical Process Control Methods 3. Use Chart theory and application 4. Develop statistical process control limits and reaction plans to apply to Out of Control (OOC) conditions 5. Apply Critical Parameter Management - capability, control and monitoring 6. Develop Process Control and Monitoring Plans 7. Execute improvement of the process control and monitoring plans 8. Integrate Process Risk Assessment with Process Control and Monitoring

MTQ 638 Supplier Development and Management
Building productive relationships with suppliers. Auditing and rating suppliers. Create specifications quality agreements and corrective actions.
3 Cr. DEMAND

MTQ 644 Medical Technology Quality Internship
Professional experience in the medical device industry. May be repeated up to a total of 6 credits. Prereq.: MTQ 620, MTQ 622, MTQ 624, MTQ 626, MTQ 628 Coreq.: 1-6 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Students will analyze and synthesize responsibilities of the medical technology quality organization in the host company.
2. Students will apply the process of planning and implementing quality strategies.
3. Students will document planning and implementation appropriately.
4. Students will write and present professionally.

MTQ 698 Culminating Experience
Individual research project with approval of instructor, or a research paper and comprehensive examination. A total of 2 credits are required. Project may be completed over 1 or 2 semesters. Coreq.: 1-2 Cr. Fall | Spring | Summer

Student Learning Outcomes
1. Associate the role of Quality professionals in all phases of new product development: concept through post market surveillance 2. Integrate and apply a wide range of instructional topics in the pursuit of successful product commercialization and ongoing business 3. Apply working knowledge to successfully accomplish the most common tasks that medical technology Quality professionals pursue 4. Synthesizing the program competencies

Music (MUS)

MUS 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUS 602 Introduction to Research in Music and Music Education
Materials, techniques and procedures for research in music and music education.
2 Cr. Spring

MUS 603 Opera Theatre
Performance of scenes, one-act and full-scale operas.
Coreq.: 1-2 Cr. Fall | Spring

MUS 604 Analytical Techniques
Methods of analyzing Western music of 18th, 19th and 20th centuries.
Prereq.: MUSM 404/504 2 Cr. Spring

MUS 605 Elementary Music Education
Major contemporary methods of teaching music in grades K-8.
2 Cr. Fall

MUS 606 Secondary Music Education
The music program in secondary school, including philosophies and methods.
2 Cr. Fall

MUS 607 Psychology of Music
Perspectives on music learning and musical intelligence, including assessment of musical aptitude and achievement.
2 Cr. Spring

MUS 608 Curriculum Development in Music Education
Philosophical and historical study of the problems of music education curricular development with emphasis on current practices.
2 Cr. Spring

MUS 609 Score Preparation
Analyzing and preparing scores for rehearsal and performance with vocal and instrumental ensembles. Includes orchestration study.
2 Cr. Summer

MUS 611 Music History
Specified periods in Western music history. Two different topics of course required for degree. Topic 1: Antiquity to Renaissance; Topic 2: Baroque/Rococo; Topic 3: Classic/Romantic; Topic 4: 20th/21st Centuries; Topic 5: Music of the Americas.
2 Cr. Spring | Summer

MUS 617 History of Wind Band Literature
Historical, social and stylistic trends unique to the wind band and its music. Educational resources and programming ideas for school bands.
3 Cr. Fall

MUS 618 Choral Literature
Choral scores and composers of different styles and eras from the Medieval period to the present. Analytical skills and program building.
3 Cr. Fall

MUS 619 Orchestral Literature
Orchestral music from the Baroque to the present. Educational resources and programming ideas for school orchestras.
3 Cr. DEMAND

MUS 620 Choral Conducting I
Review of basic conducting techniques. Study of advanced techniques, expressive gesture, score analysis, and rehearsal techniques through preparing and conducting of choral works.
2 Cr. Fall

MUS 621 Choral Conducting II
Continuation of advanced conducting techniques, score analysis, and preparation for the choral conductor.
Prereq.: MUS 620 2 Cr. Spring

MUS 622 Instrumental Conducting I
Conductor's role, expressive conducting techniques, band and orchestral repertoire and literature sources, programming, score mechanics, reading, formats, and terminology.
2 Cr.

MUS 623 Instrumental Conducting II
Score study processes, rehearsal techniques, conducting performance, procedures for self-evaluation and improvement.
Prereq.: MUS 622 2 Cr. Spring

MUS 625 Seminar in Music Education
Research and discussion of latest developments and innovations in music education.
2 Cr. DEMAND

MUS 632 Piano

Coreq.: 2-3 Cr. Fall | Spring

MUS 633 Organ

Coreq.: 2-3 Cr. Fall | Spring

MUS 634 Harpsichord

Coreq.: 2-3 Cr. Fall | Spring

MUS 635 Percussion

Coreq.: 2-3 Cr. Fall | Spring

MUS 636 Voice

Coreq.: 2-3 Cr. Fall | Spring

MUS 637 Violin

Coreq.: 2-3 Cr. Fall | Spring

MUS 638 Viola

Coreq.: 2-3 Cr. Fall | Spring

MUS 639 Cello

Coreq.: 2-3 Cr. Fall | Spring

MUS 640 Bass

Coreq.: 2-3 Cr. Fall | Spring

MUS 641 Trumpet

Coreq.: 2-3 Cr. Fall | Spring

MUS 642 French Horn

Coreq.: 2-3 Cr.

MUS 643 Trombone/Euphonium

Coreq.: 2-3 Cr. Fall | Spring

MUS 644 Tuba

Coreq.: 2-3 Cr. Fall | Spring

MUS 645 Flute/Piccolo

Coreq.: 2-3 Cr.

MUS 646 Clarinet/Bass Clarinet

Coreq.: 2-3 Cr. Fall | Spring

MUS 647 Saxophone

Coreq.: 2-3 Cr. Fall | Spring

MUS 648 Bassoon

Coreq.: 2-3 Cr. Fall | Spring

MUS 649 Oboe/English Horn

Coreq.: 2-3 Cr. Fall | Spring

MUS 652 Chamber Music Performance
Study and performance of chamber music.
1 Cr. Fall | Spring

MUS 654 Major Performing Organization
Participation in an assigned sectional rehearsal of the band, choir, or orchestra.
1 Cr. Fall | Spring

MUS 662 Piano

3 Cr. Fall | Spring

MUS 663 Organ

3 Cr. Fall | Spring

MUS 664 Harpsichord

3 Cr. Fall | Spring

MUS 665 Percussion

3 Cr. Fall | Spring

MUS 666 Voice

3 Cr. Fall | Spring

MUS 667 Violin

3 Cr. Fall | Spring

MUS 668 Viola

3 Cr. Fall | Spring

MUS 669 Cello

3 Cr. Fall | Spring

MUS 670 Bass

3 Cr. Fall | Spring

MUS 671 Trumpet

3 Cr. Fall | Spring

MUS 672 French Horn

3 Cr. Fall | Spring

MUS 673 Trombone/Euphonium

3 Cr. Fall | Spring

MUS 674 Tuba

3 Cr. Fall | Spring

MUS 675 Flute/Piccolo

3 Cr. Fall | Spring

MUS 676 Clarinet/Bass Clarinet

3 Cr. Fall | Spring

MUS 677 Saxophone

3 Cr. Fall | Spring

MUS 678 Bassoon

3 Cr. Fall | Spring

MUS 679 Oboe/English Horn

3 Cr. Fall | Spring

MUS 680 Seminar in Piano Pedagogy Research

Student research projects at all levels of piano pedagogy.
2 Cr. DEMAND

MUS 690 Selected Topics

May be repeated to a max. of 9credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUS 691 Enrollment Continuation

Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

MUS 694 Selected Topics

May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUS 695 Temporary Workshop

0 Cr. Fall | Spring | Summer

MUS 696 Masters Seminar

Preparation of exit documents and for Final Oral Exam.
1 Cr. DEMAND

MUS 698 Creative Work

Coreq.: 1-6 Cr. Fall | Spring | Summer

MUS 699 Thesis

Coreq.: 1-6 Cr. Fall | Spring | Summer

Music Education (MUSE)

MUSE 501 Credit By Arrangement

Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSE 520 Early Childhood Music

Methods and materials for teaching music to children ages two through seven.
2 Cr.

MUSE 528 Introduction to Orff-Schulwerk

Basic overview of materials and characteristics of Orff-Schulwerk-based musical instruction, with emphasis on elementary and middle-school music.
Prereq.: MUSE 201, MUSE 331 3 Cr. DEMAND

MUSE 530 Elementary and Class Piano Pedagogy

Basic problems, techniques and materials relevant to teaching elementary piano in the private studio and class piano settings. Professional responsibilities of piano teachers and business aspects of managing a private piano studio.
2 Cr. DEMAND

Student Learning Outcomes

1. Analyze pedagogical techniques and materials appropriate for the elementary piano student.
2. Apply solutions to the following: teaching piano technique, teaching musicianship, choosing progressive materials appropriate to the individual student.

3. Develop strategies to use group lessons for functional piano, elementary music theory and ensemble playing.
4. Examine various approaches to beginning and managing a studio business.
5. Develop tactics for managing parental, community and professional relationships.

MUSE 531 Intermediate and Advanced Piano Pedagogy

Basic problems, techniques and materials relevant to teaching piano to the intermediate and advanced student. History of pedagogy and performance practices.
Prereq.: MUSP 210 2 Cr. DEMAND

Student Learning Outcomes

1. Analyze pedagogical techniques and materials appropriate for the intermediate and advanced piano student.
2. Apply solutions to the following: teaching piano technique, teaching musicianship and interpretations, choosing progressive materials appropriate to the individual student, planning repertoire for recitals and competitions.
3. Assess the performance practices specific to each style period.
4. Examine the history of piano pedagogy and the various philosophical and technical approaches to it.

MUSE 542 Vocal Pedagogy

Basic techniques in the teaching of voice including the young voice. Survey of procedures and materials.
2 Cr. Even Fall

MUSE 583 Workshop: New Music Materials Clinic

Participation in clinic and music reading sessions at an approved new music materials clinic. May be repeated. Maximum 1 credit toward a degree program.
1 Cr. Summer

MUSE 588 Type B Workshop

Area limited and specific subjects selected before workshops is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSE 589 Workshop: Minnesota Music Educators Clinic

Participation in clinic and workshop sessions at Minnesota Music Educators Association Mid-Winter Clinic. May be repeated. Maximum of 1 credit toward a degree program.
1 Cr. Spring

MUSE 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSE 691 Enrollment Continuation

Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

MUSE 699 Master's Thesis

Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Music Musicianship (MUSM)

MUSM 502 Orchestration

Principles and methods of writing and arranging music for instrumental and vocal ensembles. Instruments of the orchestra, the human voice, Western music literature and arranging for various combinations of instruments.
Prereq.: MUSM 204 3 Cr. DEMAND

MUSM 503 Counterpoint

Examination and application of contrapuntal practices of Western music of the 16th - 21st centuries.
Prereq.: MUSM 304 3 Cr. DEMAND

Student Learning Outcomes

1. Develop an understanding and the ability to apply concepts and methods of counterpoint by analyzing examples of 16th, 18th, and 20th century polyphonic music.
2. Develop an understanding and the ability to apply concepts and methods of counterpoint by composing in a number of representative forms of

contrapuntal music: e.g. 2-3 part inventions, continuous variations, canons, fugues.

MUSM 504 Pedagogy of Music Theory

A comprehensive review of Western music theory and pedagogic methodology.
Prereq.: MUSM 304 2 Cr. Even Fall

MUSM 523 Jazz Harmony

A comprehensive study of jazz harmony and its application in 20th century practices.
Prereq.: MUSM 302 2 Cr. DEMAND

MUSM 533 Electronic Sound

Development of audio recording and editing skills using portable digital recorders and in the studio. Sound-art projects reflecting different styles of fixed-media electroacoustic art based on recorded sound. History and literature of electroacoustic music.
3 Cr. Fall

Student Learning Outcomes

1. Understand and become familiar with the principles of acoustics and psychoacoustics.
2. Understand and become familiar with history and literature of fixed-media electroacoustic music and develop analytical approaches to fixed-media electroacoustic music.
3. Develop skills for editing and mixing sound using DAW software.
4. Develop skills using microphones and a DAW to record sound and will develop skills using microphones and a portable digital recording device to record sound.
5. Develop skills using plug-in signal processing software to transform sound.
6. Develop skills using a desktop computer to produce Red-Book Audio spec CDs.
7. Develop the concept application and project management skills by creating fixed-media electroacoustic works demonstrating a variety of techniques and styles of music in this genre since 1950.
8. Develop the concept application and project management skills by creating and presenting a finished acoustical work to the public during the course of the semester.

MUSM 534 Digital Sound, Synthesis and Composition

Create and work with digitally synthesized sound. Sound-art projects reflecting different styles of fixed-media and real-time electroacoustic art based on synthesized sound. Introduction to history and literature of electroacoustic music featuring synthesized and digital sound.
3 Cr. Spring

Student Learning Outcomes

1. Understand and become familiar with the principles of acoustics and psychoacoustics.
2. Understand and become familiar with history and literature of synthesized and digital electroacoustic music and be able to develop analytical approaches to synthesized and digital electoacoustic music.
3. Develop skills digitally synthesizing sound, including classic AM, ring -modulated AM, FM, additive, subtractive, granular, and physical modeling synthesis.
4. Develop skills editing and mixing sound using DAW software and will develop skills using a DAW for MIDI recording, editing, and playback.
5. Develop skills using microphones and a portable digital recording device to record sound and to develop skills using plug-in signal processing software to transform sound.
6. Develop skills using a desktop computer to produce Red-Book Audio spec CDs.
7. Develop the concept application and project management skills by creating fixed-media and real-time electroacoustic works demonstrating a variety of techniques and styles of synthesis.
8. Develop the concept application and project management skills by creating and presenting a finished acoustic or real-time work to the public.

MUSM 535 Studio for Interrelated Media

Collaborative arts creation experience integrating music and other arts. Creating, rehearsing and performing collaborative/cross disciplinary works. Open to students from music and other arts areas: poetry, visual arts, theatre, film, dance.
Prereq.: MUSM 205 or MUSM 433/533 or MUSM 434/534 3 Cr. Fall | Spring

Student Learning Outcomes

1. Understand and become familiar with existing fixed and multimedia sound art.
2. Develop advanced skills editing and mixing sound using DAW software.
3. Develop musical leadership and collaboration ability to include conducting and rehearsing; develop ensemble experience and skills.
4. Develop aural skills, including the interaction of musical elements and the ability to analyze and understanding of musical forms and structure in

order to perform and compose.
5. Develop composition and improvisation skills.
6. Develop an advanced understanding of music technology and application to students' specialty.
7. Develop the concept-application and project-management abilities through creating and presenting a collaborative/cross-disciplinary art work.

MUSM 536 Piano Literature
Survey of western piano literature since 1700.
Prereq.: MUSM 321, MUSM 322 2 Cr. DEMAND

MUSM 537 Topics in New Media: Non-Traditional Performance Study
Real-time sound manipulation and sound installations in new media. Use of common software in the field. Construction of low-tech, interactive devices. History and current practices of realtime or installation sound art.
Prereq.: MUSM 205, MUSM 433/533, MUSM 434/534 3 Cr. Fall

Student Learning Outcomes
1. Understand and become familiar with the history and literature of interactive music, sound installation, or low tech audo.
2. Develop an advanced understanding of how technology can play a role in a live music making experience.
3. Develop an understanding of circuitry and electronic engineering.
4. Develop the concept-application and project-management abilities through creating and presenting a collaborative/cross-disciplinary art work.

MUSM 538 Topics in New Media: Theoretical Approach
Role of sound and image in cinema, new media, and the Web from a historical and analytical perspective. Use of tools for creating works employing audio and images, and implementing new media interactivity.
Prereq.: MUSM 205, MUSM 433/533, MUSM 434/534 3 Cr. Fall

Student Learning Outcomes
1. Understand and become familiar with the history and literature of sound and music and its use in image or online audio.
2. Develop an understanding of current web practice in music distribution.
3. Participate in online communities.
4. Develop advanced understanding of how technology can play a role in a live music making experience.
5. Develop a concept-application and project-management abilities through creating and presenting a collaborative/cross-disciplinary art work.
6. Enhance communication and analytical skills by writing about musical technology and concepts.

MUSM 568 Jazz Improvisation
Improvisation in the jazz style for all instruments.
Permission of the instructor.
2 Cr. DEMAND

MUSM 569 Jazz Arranging
Application of practical and theoretical harmony to jazz style and scoring for jazz ensembles.
Prereq.: MUSM 204 2 Cr. DEMAND

MUSM 588 Type B Workshop
Area limited specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSM 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSM 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSM 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

MUSM 694 Selected Topics

May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSM 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSM 698 Creative Work

Coreq.: 1-6 Cr. Fall | Spring | Summer

MUSM 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Music Performance (MUSP)

MUSP 505 Keyboard Accompanying
Discussion and performance of representative keyboard accompaniments. Permission of instructor.
1 Cr. DEMAND

MUSP 532 Piano

Coreq.: 1-2 Cr. Fall | Spring

MUSP 533 Organ

Coreq.: 1-2 Cr. Fall | Spring

MUSP 535 Percussion

Coreq.: 1-2 Cr. Fall | Spring

MUSP 536 Voice

Coreq.: 1-2 Cr. Fall | Spring

MUSP 537 Violin

Coreq.: 1-2 Cr. Fall | Spring

MUSP 538 Viola

Coreq.: 1-2 Cr. Fall | Spring

MUSP 539 Cello

Coreq.: 1-2 Cr. Fall | Spring

MUSP 540 Bass

Coreq.: 1-2 Cr. Fall | Spring

MUSP 541 Trumpet

Coreq.: 1-2 Cr. Fall | Spring

MUSP 542 French Horn

Coreq.: 1-2 Cr. Fall | Spring

MUSP 543 Trombone/Baritone

Coreq.: 1-2 Cr. Fall | Spring

MUSP 544 Tuba

Coreq.: 1-2 Cr. Fall | Spring

MUSP 545 Flute/Piccolo

Coreq.: 1-2 Cr. Fall | Spring

MUSP 546 Clarinet/Bass Clarinet

Coreq.: 1-2 Cr. Fall | Spring

MUSP 547 Saxophone

Coreq.: 1-2 Cr. Fall | Spring

MUSP 548 Bassoon

Coreq.: 1-2 Cr. Fall | Spring

MUSP 549 Oboe/English Horn

Coreq.: 1-2 Cr. Fall | Spring

MUSP 554 Secondary Instruments

Coreq.: 1-2 Cr. Fall | Spring

MUSP 556 Performing Ensemble
Participation and leadership in rehearsals and performances of Concert Choir, Orchestra, or Wind Ensemble. May be repeated for maximum of 2 credits.
1 Cr. Fall | Spring

MUSP 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for

continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSP 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSP 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSP 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

MUSP 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSP 695 Temporary Workshop
Area limited and specific subject selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

MUSP 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Nuclear Medicine Technology (NMDT)

NMDT 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NMDT 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NMDT 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NMDT 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NMDT 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NMDT 695 Temporary Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NMDT 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Nursing (NURS)

NURS 544 Internship
Observe and participate in nurse leader/manager activities on personnel providing health care to clients.
Prereq.: NURS 301 3 Cr. Summer

NURS 550 Readings in Nursing (Topical)
Research in nursing is examined and analyzed with the assistance of a faculty member.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NURS 551 Research
Laboratory or clinical field research in nursing.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NURS 590 Selected Topics in Nursing
Current issues in nursing. May be repeated to a max. of 6 credits.
Coreq.: 1-3 Cr. DEMAND

NURS 601 Theoretical Perspectives
Nursing theories, contemporary nursing issues, advanced nursing roles, holistic nursing concepts, health promotion, and leadership styles.
3 Cr. Fall

NURS 602 Social Issues in Health Promotion
Advanced nursing concepts centered on health promotion and disease prevention. Population and community assessment, epidemiology. Impact of community resources and ethics on health policy, multi-disciplinary approaches in culturally appropriate program implementation and evaluation strategies to promote the health of populations and communities.
Prereq.: NURS 601 Coreq.: NURS 601 3 Cr. Fall | Spring

NURS 603 Research and Evidence-based Practice
Locate, critique, and interpret research evidence for scientific merit and feasibility. Identify practice areas where evidence-based change is needed. Using scientific models for change, utilize, adopt, and incorporate change through continuous quality improvement processes that supports scholarly investigation.
Prereq.: NURS 601, NURS 602 Coreq.: NURS 601, NURS 602 3 Cr. Fall

NURS 604 Healthcare, Policy, Economics and Ethics
Policy, organization, and financing healthcare. Legislative, legal and economic issues related to healthcare and health policy. Effects of national and state economies and government on healthcare. Current and projected healthcare issues. Leadership and professional strategies with emphasis on collaboration to influence change. Ethical accountability in healthcare.
Prereq.: NURS 601 3 Cr. Spring

NURS 610 Foundations in Nursing Administration
Principles of nursing management and administration. Basic financial management, clinical decision making for various models of health care delivery for improved health care outcomes.
Prereq.: NURS 603 3 Cr. Spring

NURS 611 Advanced Nursing Administration
Advanced concepts of nursing management and administration. Institutional business planning, strategic planning, marketing and creation of financial budgets.
Prereq.: NURS 603, NURS 610 4 Cr. Fall

NURS 614 Nurse Educator Skills and Strategies
Educational skills and strategies for instruction in various nursing learning environments.
Prereq.: NURS 603 3 Cr. Spring

NURS 615 Curriculum Development
Responsive nursing curriculum development based on professional standards and agency/institutional requirements. Evaluation of program and graduate outcomes.
Prereq.: NURS 603 3 Cr. Fall

NURS 616 Cross Cultural Nursing Emphasizing Indigenous Native American Health
Multidimensional cross cultural nursing concepts with an emphasis on historical and contemporary indigenous Native American health, indigenous health challenges and strengths, health care systems, politics, tribal community, natural law, traditional healing practices.
4 Cr. Fall | Spring | Summer

NURS 617 Foundations and Dimension of Indigenous Native American Nursing & Hlth Care
Nursing and health care practicum in tribal and urban Native American communities. Research opportunities and therapeutic methods of delivering health care to indigenous people, examination of discrimination and social justice as it relates to indigenous people and identification of ways to integrate course concepts into personal perspectives and professional health world views.
4 Cr. Fall | Spring | Summer

NURS 618 Readings in Nursing (Topical)
Advanced study in nursing of research in nursing is examined and analyzed with the assistance of a faculty member.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NURS 619 Special Topics in Nursing
Current issues in specialized area of nursing. May include laboratory. May be repeated to a max. of 4 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NURS 620 Seminar in Nursing (Topical)
Oral presentations by student. Discussion and student presentation of issues in nursing. May be repeated to a max. of 4 credits.
Coreq.: 1-2 Cr. Fall | Spring | Summer

NURS 621 Scholarly Paper in Nursing
Students prepare a scholarly paper under the guidance of a faculty member.
4 Cr. Fall | Spring | Summer

NURS 622 Portfolio
Culminating portfolio of projects which fulfills the School of Graduate Studies requirement for Plan C.
Prereq.: NURS 601, NURS 603 2 Cr. DEMAND

NURS 623 Research in Nursing
Research in nursing. May be repeated to a max. of 6 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

NURS 644 Educator Track Practicum
Integrate and synthesize previously learned graduate nursing core knowledge and specialty competencies in education. Clinical immersion course of 135 hours.
Prereq.: NURS 614, NURS 615 3 Cr. DEMAND

NURS 645 Administrator Track Practicum
Integrate and synthesize previously learned graduate nursing core knowledge and specialty competencies in administration. Clinical immersion course of 135 hours.
Prereq.: NURS 610, NURS 611 3 Cr. DEMAND

NURS 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

NURS 697 Starred Paper
Culminating research paper which fulfills the School of Graduate Studies requirement for Plan B.
Prereq.: NURS 601, NURS 603 2 Cr. DEMAND

NURS 699 Thesis
Culminating research project which fulfills the School of Graduate Studies requirement for Plan A. Course can be repeated up to 6 credits. Six credits required for graduation.
Prereq.: NURS 601, NURS 603 Coreq.: 1-6 Cr. DEMAND

Philosophy (PHIL)

PHIL 501 Credit by Arrangement
Credit by arrangement from 1-3 credits.
Coreq.: 1-3 Cr. DEMAND

PHIL 511 Topics in Philosophy
Study of a single philosopher, problem or special topic. May be repeated with different topics. Graduate students will complete additional assignments.
3 Cr. Fall | Spring

PHIL 551 Seminar
Advanced study of a single philosopher, problem or special topic in a seminar setting. May be repeated with different topics. Graduate students will complete additional assignments.
Prereq.: Two courses between PHIL 301-304 3 Cr. Spring

PHIL 581 Professional Ethics
The concept of a profession and the relationships that constitute professional activity. Ethical issues including confidentiality, privacy, consent, whistle blowing, professional codes of ethics and social responsibility.
3 Cr. Even Spring

PHIL 582 Philosophy of Law and Punishment
The nature, purpose and foundations of law. Legal and moral responsibility, just punishment, the limits of authority and legal reasoning.
3 Cr. Odd Spring

PHIL 583 Business Ethics
Personal, organizational and social issues in business. Product safety, whistle blowing, employee and corporate rights and regulation. Personal dilemmas and conflicts in policy making.
3 Cr. Spring

PHIL 584 Global Business Ethics
Personal, organizational and nationalistic issues in international business. Ethical relativism, corporate responsibility for the environment, bribery and the use of Third World labor. personal dilemmas and conflicts in policy making.
3 Cr. Fall | Spring

PHIL 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHIL 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHIL 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

PHIL 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHIL 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHIL 699 Master's Thesis
Master's Thesis from 1-6 credits.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Physical Education & Sport Science (PESS)

PESS 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PESS 508 Philosophy of Sport
Objectives/values of sport in a contemporary society.
2 Cr. Fall | Spring | Summer

PESS 523 Basic Electrocardiography
Study and measurement of the electrical activity associated with cardiac function.
Prereq.: PESS 349 3 Cr. Spring

PESS 525 Workshop in Track and Field
Uses a learn-by-doing approach to track and field activities. Special emphasis will be placed on biomechanical analysis of events as well as coaching and officials certification.
1 Cr. DEMAND

PESS 530 Seminar: Topical
Selected topics in physical education and/or sport science. May be repeated to maximum of 6 credits.
Coreq.: 1-3 Cr. DEMAND

PESS 534 Organization and Administration of K-12 Physical Education
Program planning, curriculum development, methods of presentation in grades Pre K-12.
3 Cr. Spring

PESS 539 Social Skills and Initiative Activities
Adventure games, initiative problems, and trust activities which foster cooperative social skills and attitudes in children and youth.
1 Cr. DEMAND

PESS 545 Computer Applications in Health and Physical Performance
Applications of computer technology as it relates to the disciplines of health, physical education, recreation and sport science.
2 Cr. DEMAND

PESS 548 Biomechanics
The application of anatomy and physics to the study of human motion.
Prereq.: PESS 248, PESS 249, PHYS 231 3 Cr. Spring

PESS 549 Physiology of Exercise
A study of the physiological effects upon the human body.
Prereq.: PESS 349 3 Cr. Fall | Spring

PESS 550 Training and Conditioning Theory
Physiological, biochemical, and neuromuscular adaptations of training and the design of endurance, strength, and power traiing programs in order to enhance human performance in sport and fitness.
Prereq.: BIOL 202, BIOL 204, PESS 248, PESS 249, PESS 349 3 Cr. DEMAND

Student Learning Outcomes

1. Understand and know the muscular and skeletal features and functions of the human body and their involvement in exercise.
2. Understand and know the physiological and

biochemical adaptations of the cardiovascular, respiratory, neuromuscular, and muscular systems to acute and chronic exercise training.
3. Understand and know the role of strength, endurance, agility, balance, coordination, speed, power and flexibility in sport and conditioning performance.
4. Understand and know the cycles of pre-season, in-season, and post-season endurance and power training in sports.
5. Understand and know those factors involved with establishing a conditioning and resistance training program for a team or individual sport.
6. Understand and know how to develop a conditioning and resistance training program for a team or individual sport based upon an analysis of needs.
7. Understand and know the testing and evaluation of procedures for conditioning and resistance training programs.
8. Understand and know of the health and safety risk factors associated with various strength and conditioning activities and practices.

PESS 556 Administration of Interscholastic Athletics

History and objectives of national, state and local control, and modern challenges in interscholastic athletic programs.
2 Cr. Spring | Summer

PESS 561 Assessing Motor Performance of Children with Disabilities

Techniques and procedures for assessing motor performance of children with disabilities emphasizing available assessment tools, interpretation of data, preparation of Individualized Educational Programs. (IEPs), and due process.
Prereq.: PESS 312 3 Cr. Spring

PESS 562 Programming for Students with Disabilities: Grades PreK-6

Curricular programming, teaching techniques, and adaptations and/or modifications for students with disabilities in physical education settings, grades PreK to 6.
2 Cr. Fall

PESS 563 Programming for Students with Disabilities: Grades 7-12

Curricular programming, teaching techniques, and adaptations and/or modifications for students with disabilities in physical education settings, grades 7 to 12.
2 Cr. Spring

PESS 564 Developmental/Adapted Physical Education Practicum I: Grades PreK-6

Practical experiences teaching children with disabilities through direct delivery and/or consultation services in grades PreK to 6 physical education settings. S/U grading only.
2 Cr. Fall

PESS 565 Developmental/Adapted Physical Education Practicum II: Grades 7-12

Practical experiences teaching children with disabilities through direct delivery and/or consultation services in grades 7 to 12 physical education settings. S/U grading only.
2 Cr. Spring

PESS 588 Type B Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PESS 591 Psychology of Sport

Examining sport in terms of motivation, performance, and the relationship between sport and human development.
2 Cr.

PESS 600 Special Problem

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PESS 601 Research Methods in Physical Education and Sport Science

Selection of research topics, searching literature, test construction, descriptive methods, laboratory research, application of statistical procedures, formal writing, and experimental design in physical education and sport science domains. The course is also designed to help the student prepare for work

on a starred paper or thesis.
3 Cr. Spring

PESS 602 Research Seminar
Research and seminar presentation on selected topics related to physical education and sport science.
1 Cr. DEMAND

PESS 605 Introduction to Sport Management
Overview of program and field of sport management; career options; expectations of the program including core course, the thesis or internships. Basics and expectations of graduate level writing.
1 Cr. Fall | Spring | Summer

PESS 610 Social and Cultural Issues in Sport and Physical Activity
Sport and physical activity as cultural forms, examination of subcultures, stratification, socialization and power relations. Offered every 3rd semester.
3 Cr. DEMAND

PESS 612 Current Issues in Sport Management
Identify, research, and analyze current trends and issues in sport management.
2 Cr. DEMAND

PESS 615 Human Movement: A Neurological Approach
The neurological foundations of movement and abnormal movement patterns as a result of genetics, trauma, environmental influences, and disease upon the nervous system.
3 Cr. DEMAND

PESS 616 Current Issues in Developmental/Adapted Physical Education
Current issues relevant to students with disabilities, such as: state and federal mandates, education, physical activities, competitive sports, health and wellness, exercise science, and sports medicine.
3 Cr. Even Fall

PESS 618 Ethics in Sports Management
Ethical theory and principled moral reasoning in the analysis of ethical issues that arise in sport and sport business.
2 Cr. DEMAND

PESS 620 Seminar in Exercise and Sport Science
A discussion and evaluation of current research in the fields of biomechanics and exercise physiology will be held. By the end of the semester students will develop, write and present a thesis proposal.
Prereq.: PESS 630, PESS 631 3 Cr. Fall

PESS 624 Internship in Exercise and Sport Science
Course is designed to provide exercise and sport science graduate students with a research, clinical or applied experience outside of the university environment.
Prereq.: PESS 625, PESS 626 Coreq.: 3-8 Cr. DEMAND

PESS 625 Laboratory Techniques in Exercise and Sport Science I
Development of proficiency in common laboratory procedures used in exercise and sport science. Topics include: EMG, 2D and 3D cinematography, ground reaction forces, center of pressure and acelerometry.
3 Cr. Spring

PESS 626 Laboratory Techniques in Exercise and Sport Science II
Development of proficiency in common laboratory procedures used in exercise and sport science. Topics inlcude: EMG, 2D and 3D cinematography, ground reaction forces, center of pressure and accelerometry.
3 Cr. Spring

PESS 628 Numerical Analyses in Exercise and Sport Science
Development of proficiency in statistical application and techniques that are used to numerically analyze exercise and sport science data. Topics inlcude: differentiating and filtering of positional data, spectral analysis (FFT) of EMG and force data.
Prereq.: PESS 626, PESS 631 3 Cr. Fall

PESS 630 Advanced Principles in Exercise Physiology
Review of fundamental principles and concepts in exercise physiology that are relevant to fitness and sport performance. It is intended to assist the exercise science students in their preparation for the Content Exam.
3 Cr. Spring

PESS 631 Advanced Principles in Biomechanics
Review of fundamental principles and concepts in biomechanics that are relevant to injury prevention and sport performance. It is inteneded to assist the

exercise science students in their preparation for the Content Exam.
3 Cr. DEMAND

PESS 632 Seminar in Physical Education and Sport Science
Issues in coaching, teaching and/or supervising in school settings.
3 Cr. DEMAND

PESS 633 Reading and Research in Physical Education and Sport Science
Selected readings on current topics in physical education and sport science.
Coreq.: 1-4 Cr. DEMAND

PESS 637 Practicum I in Sports Management
Supervised experience in an off-campus recreational setting peculiar to the student's needs.
1 Cr. DEMAND

PESS 638 Practicum II in Sports Management
Supervised experience in an off-campus athletic setting peculiar to the student's needs.
1 Cr. DEMAND

PESS 640 Law and Sport
Provides insight into the development and implementation of sound policies, procedures, and safety regulations as the law pertains to athletics and recreational sports.
3 Cr. Fall | Spring | Summer

PESS 652 Assessment in Physical Education and Sport Science
Critical study of assessment in physical education, sport science and other related areas.
3 Cr. DEMAND

PESS 654 Advanced Theory of Competitive Athletics
Practical problems associated with coaching and training a competitive athlete through high school and college years. No one sport will be stressed.
3 Cr. Fall | Spring | Summer

PESS 658 Finance and Marketing in Sports Management
Marketing and finance techniques unique to Sports Management.
3 Cr. Fall

PESS 660 Organization and Administration in Sports Management
Introduction to the organization and administration issues in management and leadership theory in Sports Management.
3 Cr. Fall | Spring | Summer

PESS 661 Planning Physical Education and Sport Facilities
Principles, terminology, and standards for planning construction, use and maintenance of facilities.
3 Cr. DEMAND

PESS 680 Internship in Sports Management
On-site administrative internship in athletic, fitness, or recreational sports settings under the cooperative supervision of an administrator and university supervisor.
Prereq.: PESS 640, PESS 660 Coreq.: 2-6 Cr. DEMAND

PESS 690 Seminar: Topical
Selected topics of interest/need in Physical Education and Sport Management. May be repeated to a maximum of 7 credits.
Coreq.: 1-3 Cr. DEMAND

PESS 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

PESS 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PESS 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr.

PESS 699 Master's Thesis

Coreq.: 1-6 Cr. Fall | Spring | Summer

Physics (PHYS)

PHYS 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHYS 520 Seminar
Lectures, readings, discussion on selected topics. May be repeated.
Coreq.: 1-3 Cr. DEMAND

PHYS 535 Laser Optics
The interaction of light with matter including conditions for laser gain and oscillation, resonance cavities, and Gaussian beams. Examples of laser systems and applications.
Prereq.: PHYS 333 3 Cr. Odd Spring

PHYS 536 Advanced and Fourier Optics
Multilayer dielectric films, Fresnel reflection and diffraction, applications of Fourier optics.
Prereq.: PHYS 333 3 Cr. Even Spring

PHYS 542 Topics in Biomedical Engineering
Instrumentation, data analysis and phenomenological principles of clinical interest.
Prereq.: ECE 312, ENGR 334, MATH 325 3 Cr. DEMAND

PHYS 550 Special Topics in Physics
Courses designed for intensive study of important topics in basic and applied physics. Topics will be selected from relativity, medical physics, biomedical engineering, or other topics chosen by the instructor to meet a specific demand.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

PHYS 551 Special Topics in Physics
Courses designed for intensive study of important topics in basic and applied physics. Topics will be selected from relativity, medical physics, biomedical engineering, or other topics chosen by the instructor to meet a specific demand.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

PHYS 552 Special Topics in Physics
Courses designed for intensive study of important topics in basic and applied physics. Topics will be selected from relativity, medical physics, biomedical engineering, or other topics chosen by the instructor to meet a specific demand.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

PHYS 553 Special Topics in Physics
Courses designed for intensive study of important topics in basic and applied physics. Topics will be selected from relativity, medical physics, biomedical engineering, or other topics chosen by the instructor to meet a specific demand.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

PHYS 554 Special Topics in Physics
Courses designed for intensive study of important topics in basic and applied physics. Topics will be selected from relativity, medical physics, biomedical engineering, or other topics chosen by the instructor to meet a specific demand.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

PHYS 555 Special Topics in Physics
Courses designed for intensive study of important topics in basic and applied physics. Topics will be selected from relativity, medical physics, biomedical engineering, or other topics chosen by the instructor to meet a specific demand.
Prereq.: PHYS 235 Coreq.: 1-3 Cr. DEMAND

PHYS 556 Methods and Materials for Teaching Physical Science
Modern techniques and curricula for teaching secondary school physical science.
3 Cr. Fall | Spring

PHYS 576 Workshop: Solar Energy
The energy problem, the use of solar energy to help solve this problem, and theoretical background for the design and construction of a solar energy system.
1 Cr. DEMAND

PHYS 585 Workshop: Observational Astronomy
Designs of small telescopes and their operation, techniques for locating and observing astronomical objects with a small telescope.
Prereq.: ASTR 205 1 Cr. DEMAND

PHYS 586 Workshop: Holography
Basic principles of holography. Constructing simple holographs.
1 Cr. DEMAND

PHYS 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the

graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHYS 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHYS 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHYS 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

PHYS 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHYS 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PHYS 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Planning and Community Development (CMTY)

CMTY 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CMTY 522 Land Use Planning and Zoning
Basic and advanced tools, applications, and frameworks of contemporary land use planning and zoning in the United States.
3 Cr. Fall

CMTY 528 Site Planning and Development
Processes and tools for site planning, preparation, development, and implementation.
3 Cr. Spring

CMTY 550 Community Heritage
American shaped environment from colonial period until present. Will focus on meanings of prototypical building forms and analyze key roles a community's shaped environment can play in healthy community development.
3 Cr. Fall

CMTY 551 Community Design
Will examine meaning of design, forces affecting quality of natural and built environments, basic design elements and role of design professional.
3 Cr. Spring

CMTY 552 Environmental Planning
Theory, tools, principles and techniques, policy, regulation, and socio/economic impacts on communities emphasizing sustainable development, land use, economic growth, transportation, and environmental impact and mitigation issues.
3 Cr. Fall

Student Learning Outcomes
1. Identify, recite, explain, and discuss major theoretical concepts, policies, and laws pertaining to environmental planning.
2. Explain current environmental challenges as connected to economic growth, land use, transportation, and waste management issues impacting communities.
3. Collect, analyze, and interpret environmental data.
4. Evaluate and synthesize current information and apply it to appropriate planning and policy decision-making related to Sustainable Planning and Development.

CMTY 554 Regional Planning
Comparative regional planning. Economic distribution and ideological differences. Topical.
3 Cr. DEMAND

CMTY 555 Grant Development
Raising funds for public or non-profit organizations in Minnesota. Project or program design, budget

creation, objective and result delineation and writing for grants from foundations, government and corporations.
3 Cr. Spring

CMTY 564 Local Economic Development
Context, theory, process, and practice of local economic development policies for communities.
3 Cr. Spring

CMTY 566 Issues in Community Studies
A seminar on a special topic or issue in Community Studies. May be repeated under different topics.
3 Cr. Fall | Spring | Summer

CMTY 588 Television
Exact nature of the course to be offered on television will be defined by the department.
Coreq.: 1-3 Cr. DEMAND

CMTY 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CMTY 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CMTY 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

CMTY 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

CMTY 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr.

CMTY 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Political Science (POL)

POL 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

POL 511 The Presidency
Presidential selection, the leadership role of the presidency, legislative involvement, relations with the media and the American public, the president as party leader and relationships between members of the executive branch.
Prereq.: POL 111 3 Cr. Fall

POL 512 Legislative Process
Legislative functions, elections, process, influence on decision making and problems.
Prereq.: POL 111 3 Cr. Odd Spring

POL 513 Judicial Process
The structure, process and personnel of American courts with particular emphasis on the role of the US Supreme Court in the American political system.
Prereq.: POL 111 3 Cr. Even Spring

POL 534 Politics of the Arab Peninsula (Diversity)
Politics of traditionalism and change in the Arab Peninsula. The strategic and long standing relation between the Arab Peninsula countries and the United States.
3 Cr. Fall GOAL AREA 8: GLOBAL PERSPECTIVES

POL 536 Southeast Asian Governments and Politics (Diversity)
Southeast Asian governmental institutions, their political processes, and recent political and economic trajectories that form the prospects of democratization in some countries and democratic consolidation in others.
3 Cr. Even Fall

Student Learning Outcomes
1. Identify Island SEA countries and Mainland SEA countries.
2. Analyze each country's political background, cultures, and religions.
3. Examine how Buddhism, Islamism, and western colonialism formed the basis of SEA political systems.
4. Analyze SEA Al Qaeda networks.

5. Analyze the causes and consequences of European colonialism and will be able to examine local resistances against European colonists after WWII and approaches to gain independences.
6. Identify political and economic trajectories of SEA countries after independences.
7. Analyze U.S. foreign policy toward Cambodia, Laos, and Vietnam from the 1960s to the 1970s.
8. Examine contemporary regional issues.
9. Analyze international relations between SEA countries and China and between SEA countries and U.S.
10. Analyze SEA politics of drug trafficking.

POL 551 International Law

Survey of the development and contemporary application of rules and principles of international law: maritime laws, ocean resources, space, and peaceful settlement of disputes between states.
Prereq.: POL 251 3 Cr. Fall

POL 552 United Nations and Regional Organization

Organization, authority, achievements and problems of the United Nations and its auxiliary components.
Prereq.: POL 251 3 Cr. Fall | Spring | Summer

POL 553 Global Environmental Politics and Policies

Impact of global environmental politics and policies on the developing world in the era of contemporary globalization.
3 Cr. Odd Fall GOAL AREA 10: ENVIRONMENTAL ISSUES

POL 554 The Politics of the Global Economy

Interaction of nation-state and international economy explored through contending philosophies, approaches and theories (e.g. neo-realism, rational choice theory, dependency).
Prereq.: POL 251 3 Cr. DEMAND

POL 556 Terrorism, Insurgency, and World Politcs

The evolution of conflict in the post Cold War; terrorist and insurgent motivations; organizations; tactics; strategies; impact of globalization on terrorism and insurgency; the response of governments and international community.
Prereq.: POL 251 3 Cr. Spring

Student Learning Outcomes

1. Identify and describe the theories that explain terrorist and insurgent motivations and tactics.
2. Describe and discuss a broadened perspective on international affairs, particularly the dynamics of post Cold War conflicts in the global south (wars of the third kind).
3. Describe and explain post Cold War security dilemmas and the global response to current security problems.
4. Explain the politics of weak and failed states and the role that they play in post Cold War conflicts.

POL 557 Spies and Espionage

Structure and function of the intelligence apparatus in the United States with focus on the way the intelligence process contributes to foreign policy and national security decision making.
3 Cr. Even Spring

Student Learning Outcomes

1. Identify what information constitutes intelligence and the process that transforms plain information into intelligence.
2. Examine the history and development of intelligence gathering in the U.S.
3. Identify the different phases of the intelligence cycle.
4. Examine and critique the various ways of analyzing the structure of the intelligence community in the U.S. (organizational view, functional view, budgetary view).
5. Identify the various stake holders in the intelligence process (the President, different Cabinet Departments, National Security Council, Congress) and evaluate how intelligence fits in the bigger picture of national security and foreign policy.
6. Assess the different intelligence disciplines involved in intelligence gathering.
7. Analyze how oversight is exercised over the various intelligence organizations.
8. Examine how certain practices in the intelligence process can sometimes raise ethical dilemmas.
9. Identify and critique the major changes brought about by intelligence reform post 9/11.

POL 558 Global Disaster Relief Policy

International community's response to relief needs. Roles of intergovernment organizations (UN, WHO) and NGOs: administration, funding sources and their impact on efficacy.
3 Cr. Spring

Student Learning Outcomes

1. Analyze how political, economic, and cultural elements are involved in disaster relief.

2. Analyze specific international issues and propose and evaluate responses.
3. Identify appropriate immediate responses to natural and man-mad disasters.
4. Synthesize an appropriate and individualized response to disasters.
5. Implement a disaster relief program within 24 hours of a mock disaster.

POL 563 American Political and Legal Thought
Philosophy and theories which underlie the American political and legal systems of democratic government.
3 Cr. Even Spring

POL 565 Modern Ideologies
A study of the ideologies of fascism, communism and ideas which have contributed to democratic thought.
3 Cr. Fall

POL 566 Health Policies and Regulations
Policy processes and outcomes. LTC regulatory policies and their impact on SNF administration.
3 Cr. DEMAND

POL 570 Public Opinion and Electoral Behavior
Nature of public opinion and major influences on elections, parties, measurement, and impact.
Prereq.: POL 111 3 Cr. DEMAND

POL 581 Administering Public Policy
Study of the initiation, content, administration and impact of selected contemporay domestic government policies: transportation, consumerism, environment, poverty.
3 Cr. Spring

POL 582 Public Personnel Administration
Personnel methods in the public sector including recruitment, employee rights, collective bargaining, affirmative action and employee conduct.
3 Cr. Spring

POL 583 Managing Local Governments
Practical problems of local administration including grant applications, personnel, budgeting, public works and local renewal.
Prereq.: POL 312, POL 313 3 Cr. DEMAND

POL 584 Public Budgeting
Budgeting in public agencies. Emphasis on budget preparation, budget politics, capital budgets, debt administration. Practical applications of budget making.
3 Cr. Fall

POL 585 Administrative Law
Legal problems arising from use of administrative agencies; administrative procedure; judicial relief against administrative action.
Prereq.: POL 111 3 Cr. DEMAND

POL 588 Health Administration
Prepares students for extended care facility administrator's licensure exam. Covers laws, regulations, guidelines, regulatory management, nursing facility services, multicultural diversity in elderly care.
3 Cr. DEMAND

POL 591 Constitutional Law
Supreme Court's historical and current influence on American law and policy, focusing on the Commerce Clause and the 14th Amendment.
3 Cr. Fall

POL 592 The Courts and Civil Rights
Supreme Court decisions concerning individual rights and liberties, particularly those found in the First Amendment. Supreme Court decisions concerning discrimination, speech, religion, search and seizure, counsel and other individual rights.
3 Cr. Spring

POL 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

POL 601 Reading in Public and Nonprofit
Guided study of individual investigation of special problems and/or theoretical topics in public and/or nonprofit institutions.
Coreq.: 1-3 Cr. DEMAND

POL 619 American Government Seminar
Research under faculty guidance and supervision. A specific topic selected each time offered.
3 Cr. DEMAND

POL 620 Seminar: Evaluating Nonprofit Performance
Research and seminar presentations assessing the organizational performance in terms of specific

performance objectives of not-for-profit institutions.
3 Cr. DEMAND

POL 630 Seminar in Public and Nonprofit Institutions

Advanced research and seminar presentation on selected topics dealing with theoretical issues and the management and evaluation of public and nonprofit institutions.
3 Cr. DEMAND

POL 644 Internship

A supervised internship in a government agency or a private nonprofit institution. Requires prior approval.
9 Cr. DEMAND

POL 680 Seminar: Public Policy Analysis

Methods are presented for evaluating public policy before and after its implementation. Criteria for choosing alternative policies are discussed.
3 Cr. DEMAND

POL 690 Selected Topics

May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

POL 691 Enrollment Continuation

Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

POL 694 Selected Topics

May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

POL 695 Temporary Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

POL 699 Thesis

6 Cr. DEMAND

Psychology (PSY)

PSY 501 Credit By Arrangement

Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PSY 505 Ethical Issues in I/O Psychology

Professional, ethical, and legal standards and guidelines related to industrial and organizational psychology.
2 Cr. Spring

PSY 525 Psychology of Creativity

Creativity from the perspective of social, cognitive, transpersonal, organizational, and neurological psychology. Assessment and development of creativity.
Prereq.: PSY 115 or permission of instructor. 3 Cr. Spring

PSY 526 Topical: Seminar in Psychology

Topics in psychology, including an in-depth exploration with readings and discussion.
Prereq.: PSY 115 3 Cr. DEMAND

Student Learning Outcomes

1. Perform a literature search.
2. Analyze information from primary sources.
3. Evaluate the quality of information available within a topic domain and be able to perform a critical analysis of research methodologies within a domain.
4. Apply theoretical frameworks to a topic area.
5. Compare and contrast theories.
6. Synthesize information from a variety of sources by performing a literature review.
7. Use verbal skills of scholarly discourse.
8. Apply knowledge of research and theory to real-world problems.

PSY 541 Child Psychology

Study of childhood, current research, theory, and development of children in various cultures.
Prereq.: PSY 115 or equivalent 3 Cr. Fall

PSY 542 Psychology of Adolescence

Study of adolescence: current research, theory, and development of adolescents in various cultures.
Prereq.: PSY 115 or equivalent 3 Cr. Spring

PSY 543 Psychology of Adult Development and Aging

Study of adulthood and aging, current research, theory, and development of adults in various

cultures.
Prereq.: PSY 115 or equivalent 3 Cr. Fall | Spring

PSY 560 Organizational Psychology
Theory and research of organizational behavior. Leadership, culture, work motivation, and job satisfaction.
3 Cr.

PSY 573 Aggression, Anger and Violence
Origins and determinantions of human and animal aggression: psychological theories, research, and applications.
3 Cr. Spring

PSY 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PSY 589 Psychology of Learning
Psychological theories of learning. Human and animal research. Constraints on learning.
Prereq.: PSY 282, PSY 325 3 Cr. Spring

PSY 590 Psychological Disorders
Classification, description, etiology and treatment of the disorders of personality organization and behavioral integration.
3 Cr. Fall | Spring | Summer

PSY 592 Health Psychology
Research, theory and practice involved in the interrelationship of behavior, psychological states, physical health and social well being. Discussion of prevention, development of major illness, and health care policy.
3 Cr. Spring

PSY 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PSY 602 Psychometrics
Measurement theory in psychology, scaling, correlation-based statistics, test development and evaluation, reliability, validity, norms, measurement error, quasi-experimental designs.
3 Cr. Fall

PSY 603 Inferential Statistics I
Set theory, probability theory, and statistical inference, linear correlation and multiple regression, analysis of variance. By permission only.
3 Cr.

PSY 604 Inferential Statistics II
Quantitative methods in psychology. Design and analysis of multivariate experiments.
Prereq.: PSY 603 3 Cr.

PSY 630 Seminar in Psychology
In-depth study of selected topics in psychology, such as attention, personality and individual differences, human factors, job analysis and consumer psychology.
Coreq.: 1-3 Cr. DEMAND

PSY 640 Advanced Developmental Psychology
Human growth and development. Trends, problems, theory, and contemporary research.
3 Cr. Fall | Spring

PSY 647 Psychology of Aging: Theory and Research
Theory and research on the psychology of aging. Physical, social, and cognitive aspects of aging.
3 Cr. Fall | Spring | Summer

PSY 661 Criterion Development and Performance Assessment
Research, theory, and practice involved in the assessment of employee performance: development of assessment criteria, job analysis, performance appraisal methods.
Prereq.: PSY 502, PSY 603 3 Cr.

PSY 662 Psychology of Training and Organizational Development
Psychological theory and research relating to employee training and organizational development. Development and delivery of training programs and organizational development interventions.
3 Cr. DEMAND

PSY 663 Psychology of Personnel Selection

Psychological issues and techniques underlying employee hiring, placement, and classification decisions. Legal and affirmative action issues, reliability and validity, validity generalization, utility, and psychological testing.
3 Cr. DEMAND

PSY 664 Job Analysis
Theory, research, and application of job analysis methods.
3 Cr. DEMAND

PSY 671 Advanced Social Psychology
Theories and research in social psychology. Attitudes, social cognition, groups, social influence and interpersonal processes.
3 Cr. DEMAND

PSY 686 Neuropsychology
Integration of psychological theory and concepts, neurophysiology, and neuroanatomy to describe adaptive and maladaptive behavior.
3 Cr. Fall

PSY 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PSY 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

PSY 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PSY 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

PSY 696 Practicum
Field experience at a business or agency applying psychological theory and research. Prior approval of the psychology graduate committee and site supervisor required.
Coreq.: 1-6 Cr. DEMAND

PSY 699 Thesis
Prior approval from psychology graduate committee.
Coreq.: 1-6 Cr. DEMAND

Public Non Profit (PNI)

Public Safety Executive Leadership (PSEL)

PSEL 610 Advance Leadership Skills
Principles of leadership, personal mission statements, self-assessment of leadership styles, leadership skills, leadership strengths and weaknesses, and cultural and racial diversity.
4 Cr. Fall

PSEL 620 Budgeting in Public Safety
Financial accountability in public safety organizations. Evaluation, reporting, concepts and issues, management and stakeholders analysis and data-based decision making. Financial decision making for nonprofit organizations. Public accounting standards, debt management, procurement, evaluation of financial managerial personnel performance.
Prereq.: PSEL 610 4 Cr. Spring

PSEL 640 Planning and Change - A Vision to the Future for Public Safety
Strategic planning and program evaluation. Work with bargaining units, assessing community needs, working with gender and racially and culturally diverse groups, scheduling, and interagency liaison. Policy analysis and information management systems, future issues of planning, change, and technologies.
Prereq.: PSEL 610 or instructor permission. 4 Cr. Fall

PSEL 660 Human Resource Management for Public Safety
Human resource forecasting, planning and alternative staffing strategies. Staffing needs for mergers, downsizing and acquisitions. Ethical and legal implications of staffing. Recruitment and training of diverse employees. Personnel appraisal and career path development. Personnel negotiation and human resource management techniques.
Prereq.: PSEL 610, PSEL 620 or instructor permission
4 Cr. Spring

PSEL 680 Understanding and Utilizing Public Safety Research
Public safety research problem formulation and analysis, ethical considerations in research, conceptualization and operationalization, populations and sampling techniques, empirical data collection methods, qualitative and quantitative analysis, research design critique, policy analysis and program outcome evaluation.
4 Cr. Fall

PSEL 690 Leadership Seminar
Integrative experience in public safety executive leadership.
Prereq.: PSEL 610, 620, 640, 660, and 680. 4 Cr. Spring

PSEL 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

Recreation (REC)

REC 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

REC 515 Organization and Administration of Recreation and Sports Management
Daily management of human resources and departmental operations: departmental philosophies, policies and procedures; personnel management and professional compenence; management styles and personnel laws.
Prereq.: REC 301 3 Cr. Fall

REC 516 Marketing for Recreation and Sports Management
Principles of event and sport marketing; development of a marketing plan, promotional methods, marketing research, public relations, examination of sport as a consumer product and as a medium by which to sell consumer products.
Prereq.: REC 301 3 Cr. Fall

REC 588 Type B Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

REC 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

REC 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

REC 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

REC 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

REC 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

REC 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Regulatory Affairs and Services (RAS)

RAS 600 Special Problems
Independent study is available for advanced students wishing to work out a special problem in the major area of concentration. May be repeated to a maximum of three credits.
Coreq.: 1-3 Cr.

RAS 621 Legal Basis for Medical Device Product Regulation

Upon completion of this course the students will be knowledgeable about the objective and structure of the FDA, key regulations associated medical devices, and the resources available from the FDA to aid in compliance with those regulations.
3 Cr. Fall | Spring

RAS 623 Regulatory Routes to Market: 510(k)s

U.S. route to market for medical devices, the Premarket Notification of 510(k), and regulation and requirements. Best practices associated with the preparation and clearance of Premarket Notifications. Developing regulatory strategies for markets.
Prereq.: RAS 621 3 Cr. DEMAND

RAS 625 Regulatory Routes to Market: PMA's

U.S. route to market for high risk medical devices, Pre-Market Approval Application (PMA) and Pre-Market Approval regulation and requirements. Best practices associated with the preparation and approval of PMAs. Developing regulatory strategies for markets.
Prereq.: RAS 621 3 Cr. DEMAND

RAS 627 Intl Regulatory Affairs: European Union, East Europe, Australia & Canada

International regulatory affairs for medical devices with emphasis on the European Union (EU), Eastern Europe, Australia and Canada Regulatory requirements. Classification, marketing submissions, and pre- and post-market approval requirements. Regulatory strategies for global market introduction and planning for the challenges of global regulation.
3 Cr. DEMAND

RAS 631 IDE Regulations and Clinical Trial Design

Conducting clinical research on unapproved medical devices. Pre and post market approval requirements and logistics of conducting clinical trials. Principles of clinical trial design. Common study designs and scientific and practical advantages and disadvantages. Clinical Trial Life Cycle.
Prereq.: RAS 621 4 Cr. DEMAND

RAS 633 Quality Systems for Regulated Industries

Training in the content and scope of Quality Systems necessary to be an effective participant/leader in the regulated medical device industry, the evolution of quality system requirements and current perspectives on the interpretation of standards.
3 Cr. Fall | Summer

RAS 635 Regulatory Affairs Compliance

Students will be knowledgeable about the regulations associated with device product listing, facility registration, product complaint management, aware of other considerations associated with compliance such as liability, root cause analyses, effective communication, and ethical considerations.
Prereq.: RAS 633 3 Cr. Fall | Spring

RAS 641 Health Policy and the Medical Technology Industry

Historical perspective of the role of health policy in the development and diffusion of medical technology. Policy issues framed in the context of promoting versus inhibiting technology development and diffusion. A major portion of class will be devoted to analysis and critique of current and proposed health policies as they affect he medical technology industry.
3 Cr. Fall | Summer

RAS 643 Reimbursement & Cost Management for Medical Technology

Reimbursement and the role of health economics in the adoption of medical technology. Coverage, coding and payment, and their interdependencies. Economic evaluations for medical technology and the impact of economic evaluations on reimbursement decisions.
3 Cr. DEMAND

RAS 644 Regulatory Affairs Internship

Professional experience in the medical device industry. May be repeated up to a total of 6 credits.
Prereq.: RAS 621, RAS 633, ACR 622, RAS 623, RAS 631, RAS 627 Coreq.: 1-6 Cr. Fall | Spring | Summer

Student Learning Outcomes

1. Students will analyze and synthesize responsibilities of the regulatory affairs organization in the host company.
2. Students will plan, coordinate and complete assigned regulatory projects.
3. Students will complete all necessary documentation to support the projects and their completion.
4. Students will demonstrate competent technical/professional writing in project work.

RAS 651 Regulation of Combination Products

Regulatory requirements for combination products that include medical devices and drugs or biologics. FDA procedures for determining how combination products are regulated and applicable pre- and post-market requirements. International requirements for combination products.
Prereq.: RAS 623, RAS 625, RAS 633 3 Cr. DEMAND

RAS 653 Regulatory and Clinical Ethics Involving Medical Devices
Analyzing and responding to ethical issues affecting patients, physicians, government regulators and customers. Applicable codes of conduct, regulations and guidances.
Prereq.: RAS 621, RAS 631 3 Cr. DEMAND

RAS 655 International Reg Affairs: Japan, Other Asia, Latin America & Middle East
International medical device regulations, regulatory requirements and trends; classification, marketing submissions and post-approval processes. Developing, planning, and organizing regulatory strategies for successful global markets.
3 Cr. DEMAND

RAS 657 Advanced Reimbursement and Cost Management for Medical Technology
Economic evaluations for medical technology. Development of clinical and reimbursement strategies to address the three components of reimbursement. Assessing clinical data and conducting economic evaluations for medical technology.
Prereq.: RAS 643 3 Cr. DEMAND

RAS 690 Capstone Culminating Project
Background research and project scope. Written report and oral presentation.
Coreq.: 1-2 Cr. Spring | Summer

Sciences (SCI)

SCI 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SCI 520 Teaching Science in a Social Context
Teaching science in the context of human enterprise.
Prereq.: Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission Coreq.: STEM 520, IM 522, ED 531 3 Cr. Fall

SCI 522 Computer Applications in Science Education
Acquaint elementary/secondary education majors with computer applications (software, hardware, computer-based communication) in science education. Familiarity with word processing and spreadsheets is advised.
3 Cr. Spring

SCI 530 Methods & Materials for Teaching Secondary Science
An introduction to modern techniques and curricula for teaching secondary school life science.
Prereq.: Passing scores on the Minnesota Teacher Licensure Examination Basic Skills Tests or instructor permission Coreq.: STEM 521, ED 521, ED 551 3 Cr. Spring

SCI 534 Contemporary Science Curriculum K-8
Literature based overview of contemporary science curriculum for elementary schools. A hands-on overview of recent elementary programs. Includes philosophy, rationale, sample activities and assessment.
Prereq.: BIOL 302, CHEM 302, ESCI 302 3 Cr. DEMAND

SCI 536 Environmental Education for Teachers
Examination and experience with environmental curricula and materials for classroom and field instruction.
3 Cr. Fall | Summer

SCI 538 Contemporary Principles in Science Education
Topics to be determined and announced in class schecule.
Coreq.: 1-3 Cr. DEMAND

SCI 540 Seminar in Science Teaching
A companion to field experiences student teaching. Reflections and application of science teaching strategies. Repeatable up to 6 credits.
Coreq.: 1-6 Cr. Fall | Spring

Student Learning Outcomes

1. Develop and deliver appropriate curricula and materials for teaching secondary school science during their student teaching experience.
2. Summarize and appraise the use of appropriate safety requirements for teaching secondary school science as used in their teaching placement.
3. Evaluate and reflect on the use of appropriate

teaching strategies used during their student teaching experience.
4. Research and design a plan for professional development experiences for their first years of teaching.
5. Prepare a Teacher Performance Assessment (TPA) portfolio based on a 5 day unit plan, as described by the State of Minnesota.

SCI 542 Special Topics in Science
An opportunity to pursue an in-depth study of a science topic such as Environmental Education, Flora Fauna of Minnesota, Astronomy, Chemistry in the Home, Minnesota Rocks and Waters, and other topics as appropriate.
3 Cr. Fall

SCI 588 Type B Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SCI 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SCI 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr.

SCI 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

SCI 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SCI 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SCI 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Science, Technology, Engineering and Mathematics Education (STEM)

STEM 520 STEM and Information Media Field Experience
Merging theory and practice for developing inclusive and responsive curriculum, instruction and assessment in STEM in the pre K-12 setting during an in-depth field experience. Active involvement in classrooms includes working with ESL, special education or other historically under-served students as well as incorporating information media into the classroom.
Prereq.: Admission to major program and teacher education. Coreq.: ED 531 and IM 522 and either MATH 531 or SCI 520 1 Cr. Fall

Student Learning Outcomes
1. Analyze and observe the culture of the school and classroom.
2. Create safe, respectful, democratic cultures and learning communities in the classroom.
3. Apply communication and relationship-building strategies with students, peers, school employees, and parents/community members.
4. Implement inclusive and equitable curricula, assessment, and instruction based on diverse learner needs.
5. Apply language development, literacy knowledge, and skills to instructional activities in a content area.
6. Develop and team teach interdisciplinary curriculum.
7. Apply STEM content to instructional activities in a content area.
8. Apply technology standards to instructional activities in STEM and content area.

STEM 521 STEM and Content Literacy Field Experience

Merging theory and practice for developing inclusive and responsive curriculum, instruction and assessment in STEM in the pre K-12 setting during an in-depth field experience. Active involvement in classrooms includes working with ESL, special education or other historically under-served students as well as incorporating content literacy into the classroom.
Prereq.: Admission to major program and teacher education. Coreq.: ED 521 and ED 551 and either MATH 532 or SCI 530 1 Cr. Spring

Student Learning Outcomes
1. Analyze and observe the culture of the high school environment and classroom.
2. Create safe, respectful, democratic cultures and learning communities in the high school classroom.
3. Apply communication and relationship-building strategies with students, peers, school employees, and parents/community members.
4. Implement inclusive and equitable curricula, assessment, and instruction based on diverse learner needs.
5. Apply language development, literacy knowledge, and skills to instructional activities in a content area.
6. Develop and team teach interdisciplinary curriculum.
7. Apply STEM content to instructional activities in a content area.

STEM 525 Engineering and Technology for the P-6 Classroom

The STEM teacher's role in the P-6 classroom, focusing on engineering and technology. Hands-on, problem solving activities for the P-6 classroom. Curriculum development, instructional strategies, and use of technology.
3 Cr. Fall | Odd Summer

Student Learning Outcomes
1. Identify effective STEM curriculum.
2. Develop STEM curriculum for P-6 students.
3. Use the Project Lead The Way curriculum in a classroom setting.
4. Apply formative and summative assessment.
5. Apply Minnesota state educational standards in Science, mathematics and National Standards of Technological Literacy.
6. Create activities for P-6 students that are STEM based.
7. Implement technology in activities for P-6 students.

STEM 531 Physics for the P-6 Classroom

Physics topics from mechanics, thermodynamics, waves and sound, electricity and magnetism, and optics. Problem solving and laboratory skills for the P-6 classroom.
Coreq.: 3.0 Cr. Fall | Odd Summer

Student Learning Outcomes
1. Describe motion (kinematics) using quantitative vocabulary.
2. Apply Newton's laws to mechanical systems.
3. Solve dynamics problems using energy and momentum concepts.
4. Manipulate and control electric and magnetic forces.
5. Analyze basic electric circuits.
6. Verify properties of light.

STEM 542 Teaching and Learning Life, Earth and Space Science for the P-6 Classroom

Research, modeling, and investigations of the Minnesota Science Standards K-6 in life and earth science. Content, methods, materials, assessment, integration of STEM into science education.
3 Cr. Spring | Even Spring

Student Learning Outcomes
1. Identify how STEM subjects are interrelated and how incorporating STEM into life, earth, and space science classrooms impacts student learning.
2. Apply knowledge of the K-6 Minnesota Science Standards.
3. Evaluate methods, materials, and content in teaching and learning life, earth, and space science.
4. Apply research in selecting methods and materials for student learning in life, earth, and space science.
5. Evaluate current trends in teaching and learning life, earth, and space science.
6. Identify technologies as an instructional tool in the life, earth, and space science P-6 classroom.
7. Demonstrate appropriate life, earth, and space science teaching methods, materials, and content for teaching P-6 students.
8. Demonstrate appropriate assessment of P-6 life, earth, and space science students.

STEM 551 Reasoning and Proof for the P-6 Classroom

Problem solving, conjecture, generalization, and proof in effective teaching of STEM. Mathematical reasoning as an iterative process of conjecturing, generalizing, and investigating. Topics are drawn from set theory, logic, arithmetic, algebra, geometry

and STEM fields.
3 Cr. Fall | Odd Summer

Student Learning Outcomes
1. Formulate and interpret statements presented in Boolean logic. Reformulate statements from common language to formal logic. Apply truth tables and the rules of propositional and predicate calculus.
2. Write and interpret mathematical notation and mathematical definitions.
3. Demonstrate a mathematical proof of a stated algebraic relation using any of the following techniques: direct proof, indirect proof, contradiction, mathematical induction.
4. Demonstrate the use of mathematical reasoning by justifying and generalizing patterns and relationships.
5. Write solutions to problems and proofs of theorems that meet rigorous standards based on content, organization and coherence, argument and support, and style and mechanics.
6. Identify and use current standards (state, national, and NCTM), both content and process, for the P-6 mathematics curriculum.
7. Analyze research on the teaching and learning of problem solving, conjecture, generalization and proof in the P-6 mathematics curriculum.
8. Identify technologies as an instruction tool in the P-6 or special education classroom.
9. Use problem solving approaches to solve and justify solutions of various types of problems drawn from the STEM fields.
10. Develop lessons for the P-6 or special education classroom using recent research on the teaching and learning of problem solving, conjecture, generalization, and proof.

STEM 552 Data and Chance for the P-6 Classroom
Data and chance in effective teaching of STEM. Data collection, organization, and analysis; measures of center and variance, inferences and convincing arguments; subjective, theoretical, experimental, and conditional probability; simulation; counting principles; mathematical expectation.
3 Cr. Spring | Even Summer

Student Learning Outcomes
1. Organize and summarize data in order to read and interpret graphs.
2. Describe data numerically using measures of center, position, spread, and equations.
3. Compute and interpret probabilities using empirical and theoretical methods.
4. Apply rules of probability to discrete and continuous distributions.
5. Generate data through sampling and experiments.
6. Use the logic of statistical inference to draw conclusions about populations.
7. Implement the ideals articulated in the data and uncertainty strands of the Principles and Standards for School Mathematics, the Minnesota K-12 Mathematics Framework.
8. Analyze research on the teaching and learning of data, statistics, and probability in the P-6 mathematics curriculum.
9. Identify technologies as an instruction tool for statistics and probability in the P-6 or special education classroom.
10. Develop lessons for the P-6 or special education classroom using recent research on the teaching and learning of data, statistics, and probability.

Social Studies (SST)

SST 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SST 541 Integrating Social Studies Theory and Practice
Development of inclusive and responsive curriculum, instruction and assessment in the pre 5-12 setting during an in-depth field experience. Active involvement in classrooms includes working with ESL, special education and/or other historically under-served students.
Prereq.: Admittance to Teacher Education; ED 300; CEEP 361; IM 422; HURL 497. Either co-req or pre-req. ED 460 or ENGL 460 and SPED 203. Coreq.: ED 421, 431, SST 453 2 Cr. Fall | Spring

SST 560 Social Science Seminar
Analysis of issues or problems of an interdisciplinary social science nature. A specific topic will be selected each time the course is offered. May be repeated up to 9 credits with different topics.
Coreq.: 1-3 Cr. DEMAND

SST 570 Area Studies Seminar
Interdisciplinary social science analysis of conditions of an area. A specific country or region will be selected each time the course is offered. May be repeated up to 9 credits with different country or region.
Coreq.: 1-3 Cr. DEMAND

SST 588 Type B Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SST 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SST 630 Problems in Social Sciences
Examination of the methods used and the problems faced in the various social science disciplines.
3 Cr. DEMAND

SST 640 Recent Trends in Teaching Social Studies in Secondary (Topical)
The secondary school social studies program viewed in light of new methods, curriculum trends, materials, and philosophies. May be repeated with different topics to a max. of 9 credits.
3 Cr. Summer

SST 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SST 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

SST 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SST 695 Temporary Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SST 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. DEMAND

Social Work (SW)

SW 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SW 517 Adolescent Mental Health and Social Work Practice
Adolescent developmental theories, mental health, current issues, school issues, treatment modalities, global perspectives, and current best practices for treatment.
Coreq.: Cr. Summer | DEMAND

Student Learning Outcomes

1. Analyze adolescent development through the 21st century.
2. Evaluate how past and current adolescent theories influence work with adolescents.
3. Analyze issues and disorders specific to adolescence and examine effective treatment modalities.
4. Apply evidence based practices in working with adolescents.
5. Analyze how adolescents are treated globally.

SW 521 Child Welfare: Public-Private
Child welfare practice to assure child safety, permanency, and well-being.
Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Apply knowledge of social work theories to engage, assess, and intervene with children and families to assure child safety, permanency and well-being.
2. Examine societal values as they impact attitudes, expectations, and policy development for child safety, permanency, well-being, and family capacity to care for children.
3. Examine the role of historical, current, and evolving major U.S. policies impacting current child welfare practice and service delivery systems.
4. Synthesize the role and interaction of poverty, race, ethnicity, interpersonal and societal violence,

trauma, and human and family development on children and families as it impacts children, families, and their communities related to child safety, permanency and well-being.
5. Examine the types of child maltreatment and intervention approaches through various service systems including child protection, foster care, courts, and community.
6. Apply evidence-based practices incorporating utilization of the continuum of supportive, supplemental, and substitute services available to children and families.
7. Develop skills for culturally appropriate engagement, assessment, and intervention with children and families from all types of family structures.

SW 530 Social Work Practice with the Aging
Social services related to aging including practice settings, skills, values, social policy and research.
3 Cr. DEMAND

SW 588 Type B Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SW 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SW 610 Social Work Frameworks
Foundation course. History, values, ethics, theoretical bases and practice frameworks for generalist social work practice.
3 Cr. Summer

SW 611 Generalist Social Work Practice I
Foundation course. Integration of theory and practice with individuals, families and small groups.
Prereq.: SW 610 3 Cr. Fall

SW 612 Generalist Social Work Practice II
Foundation course. Integration of theory and practice with small groups, communities and organizations.
Prereq.: SW 611 3 Cr. Spring

SW 613 Social Work with Marginalized Populations
Foundation course. Social work practice with a variety of diverse populations. Cultural competence, discrimination, oppression and social justice.
3 Cr. Fall

SW 614 Human Behavior in the Social Environment
Foundation course. Social work theories, critical and race theories, and developmental theories applied to social work practice with individuals, families, and communities.
3 Cr. Fall

SW 615 Field Placement I
Foundation course. Educationally directed 150 hours of field placement in an approved social work organization. Arranged with the MSW Field Director.
Prereq.: SW 610 Coreq.: SW 616 1 Cr. Fall

SW 616 Integrated Practice Seminar I
Foundation course. Integration and application of generalist practice at micro, mezzo, and macro levels with client systems. Critical thinking, collaboration skills in social work practice.
Coreq.: SW 615 2 Cr. Fall

SW 618 Advanced Generalist Practice with Refugees & Immigrants
Identification and application of generalist and clinical social work assessment and intervention of the major migrant groups, to help individuals, families, groups and communities who are currently living in the U.S.
3 Cr. Spring

Student Learning Outcomes
1. Reflect on students' own vulnerability to compassion fatigue and vicarious traumatization.
2. Evaluate and contextualize personal and familial underpinnings of why people migrate.
3. Apply pre-immigration and/or immigration experiences of clients that are relevant to successful adaptation for immigrants and refugees in new homelands.
4. Analyze inter-generational issues involved in immigration and how they bring about differences

and derailments in experiences between the generations.
5. Utilize multi-theoretical, multi-systemic models relevant to social work practice with immigrants and refugees.

SW 621 Social Welfare Policy
Foundation course. Critical analysis economic, political, social and cultural components of United States and global social welfare policy as they effect individuals, families and communities.
3 Cr. Spring

SW 622 Research Methods
Foundation course. Research methods for use in a variety of social service and social action settings including quantitative, qualitative, practice and program evaluation.
3 Cr. Spring

SW 625 Field Placement II
Foundation course. Educationally directed 150 hours of field placement in an approved social work organization. Continuation of 615. Approved by MSW Field Director.
Prereq.: SW 615, SW 616 Coreq.: SW 626 1 Cr. Spring

SW 626 Integrated Practice Seminar II
Foundation course. Generalist practice at micro, mezzo, and macro levels with client systems. Critical thinking, collaboration skills in social work practice. Continuation of 616.
Prereq.: SW 616 Coreq.: SW 625 2 Cr. Spring

SW 631 Advanced Generalist Practice with Individuals and Families
Concentration course. Examination of social work theories and application to practice with individuals, families and small groups.
3 Cr. Fall

SW 634 Advanced General Practice with Communities and Organizations
Social work theories and their application to social work practice in communities and organizations.
3 Cr. Fall

Student Learning Outcomes
1. Describe theories of community change and the dynamics of changing communities.
2. Describe how to access communities, their resources, and create effective community change.
3. Explain the power structure of communities and the effect power has on diversity in communities.
4. Analyze the impact of diversity in changing communities.
5. Utilize strategies and interventions for promoting social justice, social change and social policy, in communities and organizations.
6. Apply social work ethics and values when working with communities and organizations.
7. Distinguish between dominant organizational theories, and identify effective ways for working within each organizational structure.
8. Explain different organizational leadership theories and develop leadership styles.

SW 635 Field Placement III
Concentration course. Educationally directed 300 hours of field placement in an approved social work organization. Approved by MSW Field Director.
Coreq.: SW 636 2 Cr. Fall

SW 636 Integrated Practice Seminar III
Concentration course. Integration of advanced generalist theory, other theories. Application of social work practice with individuals and families within changing communities.
Coreq.: SW 635 2 Cr. Fall

SW 642 Advanced Policy Practice
Concentration course. Critical analysis of social welfare policy including theories of policy development, implementation and advocacy within social and political systems.
Prereq.: Foundation courses/advanced standing 3 Cr. Fall

SW 645 Field Placement IV
Educationally directed 300 hours of field placement in an approved social work organization. Continuation of SW 635. Approved by MSW Field Director.
Prereq.: SW 631, SW 634, SW 635, SW 636 Coreq.: SW 646 2 Cr. Spring

SW 646 Integrated Practice Seminar IV
Concentration course. Integration of advanced generalist theory, other theories. Application to agency/organization setting. Groups, organizations, and communities. Continuation of 636.
Prereq.: SW 636 Coreq.: SW 641, SW 645 2 Cr. Spring

SW 650 Mental Health and Social Work Practice
Psychological, social, biological contributions to mental health disorders. Symptoms, etiologies,

appropriate assessment tools, and intervention.
3 Cr. Fall

SW 680 Advanced Clinical Social Work Practice

Skills to diagnose conditions in the current DSM to effectively engage in differential diagnosis and apply evidence-based clinical interventions.
Prereq.: SW 650 3 Cr. Spring

Student Learning Outcomes

1. Describe general diagnostic criteria for common mental health disorders.
2. Apply techniques for accurately differentiating between common mental health disorders.
3. Apply empirically supported clinical social work interventions.
4. Describe social and cultural implications of common mental health disorders.
5. Develop a treatment plan as part of a multidisciplinary team.

SW 681 Social Work Leadership and Supervision

Leadership methods for social work supervisors.
Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Describe the emergence and growth of leadership and supervision, and their roles in the change process.
2. Contrast the relationships, mutual dependencies, and unique differences between leadership and supervision.
3. Identify the unique leadership and supervision issues in human services.
4. Illustrate the role that leadership and supervision play in enhancing the effectiveness of human services agencies.
5. Analyze leadership and supervision theories, the strategic relationships they establish and their role in building social and human capital in human services.
6. Evaluate case studies and scholarly literature on leadership and supervision.

SW 682 Social Work Ethics and Values

Ethical issues and individual values that impact ethical behavior and decisions in social work practice.
Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Describe the history and evolution of values and ethics in the social work profession.
2. Apply relevant ethical concepts and theories of social work practice.
3. Compare state, jurisdictional and federal laws and ethical standards of practice.
4. Contrast the interplay of personal values and professional behavior.
5. Analyze ethical issues and apply ethical decision making frameworks and protocols through enhanced use of critical thinking skills.
6. Analyze the role of diversity and social justice in understanding and addressing ethical dilemmas.

SW 683 Social Work Mental Health Diagnosis and Treatment

Theory, social work frameworks, and methods of diagnosing and treating mental health conditions.
Coreq.: Cr. DEMAND

Student Learning Outcomes

1. Distinguish and apply the diagnostic process.
2. Conduct and interpret mental status exams and other relevant tests.
3. Compare counseling and psychotherapy theories.
4. Develop treatment plans.
5. Apply evidence based therapies.
6. Document diagnostic assessment and evaluate treatment interventions.

SW 684 Social Work Assessment and Treatment of Trauma

Theory, social work framework, and methods of assessing and treating trauma in social work practice. Identification and application of generalist and clinical social work assessment and interventions.
3 Cr. Summer | DEMAND

Student Learning Outcomes

1. Contrast effective assessment strategies and tools to identify impact of trauma.
2. Apply the trauma practice model in a therapeutic context.
3. Categorize strategies to manage and promote safety and stabilization.
4. Analyze evidence-based trauma treatment strategies.
5. Apply the process of reconnection for clients who have experienced trauma.
6. Predict lifelong implications of trauma and strategies required for sustained functioning.

SW 690 Selected Topics

May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SW 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

SW 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SW 695 Temporary Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SW 699 Thesis

Prereq.: SW 630, SW 631, SW 632, SW 641, SW 642
Coreq.: SW 630, SW 631, SW 641, SW 642 3 Cr. Fall | Spring

Sociology (SOC)

SOC 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SOC 512 Self and Society
Nature, origins, development, maintenance, and change of self. Relationships between self and social situations, social interactions and social worlds.
3 Cr. DEMAND

SOC 518 China and Globalization

3 Cr. DEMAND

Student Learning Outcomes
1. Identify and describe China's market-oriented reforms of the early 21st Century that have shaped and been impacted by the social consequences of globalization.
2. Situate Chinese societies in broad, multi-faceted, and dynamic global social contexts.
3. Analyze alternative trajectories and global views of social development via study of the Chinese case.
4. Analyze shared challenges facing Chinese citizens and those from other societies around the globe.
5. Use sociological concepts and tools to assess different social policies and developmental strategies in response to the impact of globalization on present-day Chinese society.

SOC 555 Sociology of Work
Changing nature of U.S. and global workforce social meaning and organization of work. Links between workplace relations and social inequality.
3 Cr. DEMAND

SOC 556 Complex Organizations
Formal and informal organizational structures processes, and behavior. Power, conflict, roles, values, and culture in corporations and bureaucracies.
3 Cr. Even Fall

SOC 560 Social Practice and Policy
Evaluation of policies and social change practices employed to address social problems. Each year may have a different focus. Social movements, community organizing, and other challenges to power structures at the meso level. Includes a practice component.
3 Cr. Even Spring

SOC 562 Seminar
Evaluation of sociological theory, social issues, or contemporary events. A specific topic selected each time offered. May be repeated.
Coreq.: 1-3 Cr. DEMAND

SOC 567 Sociology of Religion
Religion from the perspective of classical and contemporary sociological theory; secularization, religion as a social institution, ideology, construction of social meaning, and alienation.
3 Cr. Fall | Spring

Student Learning Outcomes
1. Demonstrate a sociological understanding of religion as a social institution.
2. Critically examine the theoretical perspectives on the role of religion and religious institutions.
3. Critically examine the sociological significance of our own perspectives related to religion an religious institutions.
4. Sociologically examine how religion and religious institutions are impacted by capitalism in the US and globally.

SOC 568 Inequality in the Capitalist World System

Minority/subordinate group formation, stratification and interaction in the capitalist world system.
3 Cr. DEMAND

SOC 572 Sociology of Family

Roles and relationships within the family, household structures, marriage/partnership patterns: changing patterns of the family and its relationships with other social institutions; policy implications.
3 Cr. Fall

SOC 573 The Sociology of Sexualities

Multiple theories to explore sexualities and the ways in which they are socially constructed and controlled by social structures in societies.
3 Cr. Spring

Student Learning Outcomes

1. Develop a sociological understanding of sex and sexualities in a global context.
2. Critically examine theoretical perspectives on sexualities.
3. Critically examine the significance of our own perspectives related to sexualities.
4. Critically examine how sexualities are impacted by other social constructs.

SOC 574 Culture and Family

Family structure and dynamics in Non-Western countries. Cultural variations, historical and contemporary family patterns, relationship of family to other institutions, comparisons of Non-Western and Western families.
Prereq.: SOC 111 or SOC 160 or ANTH 267, or consent of instructor 3 Cr. Fall | Spring | Summer

SOC 575 Sociology of Health and Illness

Sociocultural aspects of illness, health, treatment, health care delivery, and the social organization of health care.
3 Cr. Fall

SOC 578 Advanced Statistics and Practice

Multivariate statistical analysis utilizing statistical software programs to understand complex social issues.
Prereq.: SOC 304 3 Cr. Fall | Spring | Summer

SOC 582 Sociology and the Global Politics of Food

Examines the sociological and political dimensions of food. The processes of food production, distribution, and consumption and how these processes relate to structures of power and inequality.
3 Cr. Fall

Student Learning Outcomes

1. Understand the social meanings and the structural relations of power regarding the production, distribution, preparation and consumption of food.
2. Develop a sociological understanding of the structure of a globalized, industrialized agriculture and food system and the impacts on farmers, consumers and communities.
3. Understand the organization of a global food system that links the production and consumption of food; particularly how it generates abundance for some and famine for others.
4. Acquire knowledge of current responses to social problems regarding food and agriculture.
5. Understand how sociological concepts, theories, methods, and findings can be applied to the study of food.
6. Gain an appreciation for the value of sociology and sociological perspectives in examining the world.
7. Gain an appreciation for the multiple ways in which sociology can be applied.

SOC 588 Type B Workshops

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by the inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SOC 598 Practical Research and Writing

Engage students in action research, evaluation research, discourse analysis, participatory research models in the community. May include grant writing, grant reports, executive summaries, needs assessment, evaluation research, policy proposals or other practical research and writing experiences.
3 Cr. Odd Spring

Student Learning Outcomes

1. Combine sociological research with social activism/social change efforts, such as grassroots/community organizing, service provision, policy changes, resource mobilizing, etc. Action

research/participatory research.
2. Implement research strategies used most often in community organizations, such as needs assessment and evaluation research and the consequences of working within organizations/instititions.
3. Write professional reports of research based on the population they are serving.
4. Use best practices for grant writing, professional solicitations for funds, creating brochures and outreach materials, policy analysis, and professional presentations depending on the audience they are working with in the community.
5. Apply critical methods such as discourse analysis, semiotic analysis, etc., to help them situate cultural forms within the power structures of society and how to use research to expose those power relationships.
6. Situate practical or applied oriented work within a body of sociological literature and theory.

SOC 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SOC 602 Seminar in Social Psychology
Theory and research in sociological social psychology. Classic works of theory and recent trends in theory research.
3 Cr. Fall | Spring | Summer

SOC 630 Topics in Social Responsibility
Topics and issues in the study and practice of social responsibility. Specific titles to be listed in class schedule. May be repeated under different topics to a max. of 6 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SOC 644 Internship
Internship in application of sociological knowledge and methods in business, government, nonprofit settings. Development of skills in research, analysis of problems, community organizing, and social change; development, implementation and evaluation of programs and policies. May be repeated up to 8 credits.
Coreq.: 3-8 Cr.

SOC 650 Sociology of Aging and the Life Course
Aging over the life course as a social process. Impact of baby boomers on health care system, social security, public policy, family and work place. Includes aging well, diversity and lifestyles, ethical and justice issues.
3 Cr. Fall | Spring | Summer

SOC 656 Seminar in the Sociological Study of Organizations
Organizational structures, processes, and outcomes examined from the sociological perspective. Prevalence of organizations in modern societies, sources of internal organizational structure, external and interorganizational relations, increasing complexity and organization of social environments.
3 Cr. Fall | Spring | Summer

SOC 672 Family Theory and Research
The family's structure and function. Theories and research methods used in studying the family. The use of current research to explain variations and trends in family interaction.
3 Cr. Fall | Spring | Summer

SOC 679 Advanced Research Methods
Advanced data collection and analysis techniques.
3 Cr. Spring

SOC 680 Seminar in Sociological Practice
Use of theory, methods, and intervention efforts on behalf of clients.
3 Cr. Fall | Spring | Summer

SOC 684 Sociology of Social Responsibility
Integrating social theory and research with advanced topics in social problems and policy. Class and labor in a global context. Which social actors are responsible for social problems, and how they can be held accountable for realistic solutions.
3 Cr. Spring

SOC 685 Sociological Theory
Historical and ideological roots of classical and contemporary theories. Meaning and application of theory in traditional and applied research.
3 Cr. Fall

SOC 689 Advanced Analysis of Deviance in Society
Theoretical perspectives and predominant issues related to the sociology of deviance.
3 Cr. Fall | Spring | Summer

SOC 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SOC 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr.

SOC 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SOC 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr.

SOC 699 Master's Thesis

Coreq.: 1-6 Cr. Fall | Spring

Software Engineering (SE)

SE 512 Data Mining for Software Engineering
Mining interesting information from large data sets. Statistical analysis and machine learning, data mining concepts and techniques, data representation and their similarity/dissimilarity measures, data pre-processing, frequent pattern mining, supervised and unsupervised modeling.
Prereq.: SE 640 Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Identify data mining concepts and technologies 2. Identify the different types of data, their statistical description, and similarity/dissimilarity measures 3. Apply basic data pre-processing techniques 4. Derive interesting patterns using frequent pattern mining techniques 5. Apply and predict future instances using supervised learning techniques (classification) 6. Apply cluster analysis techniques to group similar data (unsupervised learning) 7. Use a variety of data mining tools

SE 513 Big Data Organization and Management
Data analytics concepts and techniques. Big data features and representations, data collection and sampling, predicative modeling, frequent patterns, social networks analysis, data benchmarking and privacy, data modeling and documentation.
Prereq.: SE 512 Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Identify the characteristics of big data 2. Apply concepts of data collection, sampling, and pre-processing techniques 3. Apply predictive analysis techniques 4. Use descriptive analysis techniques, including association rules, sequence rules, and segmentation 5. Apply analysis to social networks 6. Evaluate benchmarking, data quality, privacy, software and model design and documentation

SE 550 Software Reverse Engineering
Analyzing and understanding software, without access to source code or design documents. Deducing the design of a software component. Recovering specifications, discover data use, and analyzing software via disassembly and decompilation.
Coreq.: Cr. Spring

Student Learning Outcomes
1. Define and explain the basics of software engineering systems 2. Identify key concepts related to re-engineering, forward engineering, and reverse engineering 3. Apply software reverse engineering methodologies and tools 4. Describe the legal issues governing the use of software reverse engineering techniques

SE 560 Software Analysis
Software requirements analysis, requirement specification,elicitation, verification and validation, quality assurance metrics.
Coreq.: Cr. Fall

Student Learning Outcomes
1. Evaluate specification and elicitation of requirements using avariety of techniques 2. Summarize, organize and prioritize requirements 3. Apply analysis techniques such as needs analysis, goal analysis, and use case analysis 4. Validate requirements according to criteria such as feasibility, clarity, freedom from ambiguity 5. Represent functional and non-functional requirements for different types of systems using formal and informal techniques 6. Specify and measure software quality attributes

SE 565 Software Design
Formal methods of software analysis/design. Design patterns,standard middle-ware, software

architecture including object/function oriented design. Design quality assurance management.
Coreq.: Cr. Spring

Student Learning Outcomes
1. Evaluate common design patterns, frameworks, and architectures 2. Analyze standard middle-ware technologies 3. Evaluate quality metrics as objectives for software designs, and then measure and assess designs to ensure the objectives have been met 4. Modify software designs using change control approaches 5. Use reverse engineering techniques to recapture the design of software

SE 578 Introduction to Enterprise Resource Planning Systems

Enterprise system integration, process management and workflow, supply chain management, customer relationship management.
Prereq.: SE 640 Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Analyze and evaluate the challenges of system integration 2. Evaluate issues of enterprise architecture, design, development, implementation, and project management 3. Apply related concepts, technologies, and trends in enterprise planning including forward, backward, and upward integration of the enterprise using supply chain management and customer relationship management.

SE 579 Information Technology Transformation

Technological and managerial aspects of information technology. Change management and transformation. Process review and risk management.
Prereq.: SE 578 Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Evaluate the impact of future IT innovations on their firm and industry 2. Analyze key drivers of technology's impact on the business ecosystem 3. Apply appropriate frameworks to categorize technological innovation and its impact along a variety of metrics including competitive environment, business model disruption, and supply chain structure 4. Effectively communicate recommendations in both written and oral discourse

SE 640 Foundations of Software Engineering

Prescriptive and agile process models, software engineering framework and umbrella activities, software analysis, design, construction, testing, quality.
Prereq.: SE 565 Coreq.: Cr. Fall

Student Learning Outcomes
1. Describe and use prescriptive and agile software engineering process models 2. Apply software engineering framework and umbrella activities to construct high quality software 3. Apply software analysis, design, and construction techniques for software development 4. Apply software quality and testing strategies to validate, verify, and construct high quality software

SE 641 Application and Database Systems

Database modeling, design, and implementation. Relational and non-relational databases, databases management, querying, transactions, concurrency, and crash recovery. Database indexing. Parallel and distributed databases.
Prereq.: SE 640 Coreq.: Cr. Fall

Student Learning Outcomes
1. Apply data modeling and design techniques to create relational and non-relational databases 2. Implement techniques for transaction processing, query optimization, concurrency control, and crash recovery 3. Define and discuss parallel and distributed databases 4. Apply fast indexing techniques to databases 5. Integrate relational and non-relational databases with software systems

SE 644 Graduate Internship

An internship of not less than 10 weeks, with a professional organization, performing duties that are relevant to the student's course of study.
Prereq.: Completion of one year in the software engineering graduate program Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Apply teamwork skills in an industrial setting 2. Develop software planning and management skills in an industrial setting 3. Implement appropriate software engineering process models in an industrial setting 4. Integrate the software engineering life-cycle into development in an industrial setting

SE 670 Fundamentals of Software Quality Assurance

Software quality assurance, testing principles, and techniques. Development life-cycle models and software testing, terminologies, and software tools.

Extracting requirements and producing test cases.
Prereq.: SE 640 Coreq.: Cr. Spring

Student Learning Outcomes
1. Integrate software quality attributes into the testing stages of the software development life-cycle 2. Extract requirements and other relevant information from stakeholders, project documentation, and other sources 3. Apply suitable testing types and techniques 4. Identify, prioritize, plan, and execute test cases as part of the software test management process 5. Implement automation in testing for modern software development

SE 680 Advanced Software Project Management
Roles and responsibilities of a software project manager. Management methods and processes of software projects. Approaches and styles of management for software projects.
Prereq.: SE 675 Coreq.: Cr. Spring

Student Learning Outcomes
1. Develop a comprehensive and realistic project plan 2. Implement project management techniques following Agile methods 3. Estimate costs for a project using various estimation techniques 4. Define milestones using function point measurement techniques 5. Measure project progress, productivity, and other aspects of the software process

SE 685 Capstone Project
Project or research, with a faculty adviser, in an area of Software Engineering.
Coreq.: Cr. DEMAND

Student Learning Outcomes
1. Apply teamwork skills through the software engineering life-cycle 2. Implement iterative communications with project stakeholders for software requirements engineering 3. Build quality software using software analysis, design, and construction approaches 4. Develop Agile software engineering process models to analyze, design, construct, and deploy quality software

Soviet Studies (SOV)

SOV 520 Contemporary Policy Issues in Soviet and Eurasian Studies
Policy-oriented analysis of key issues facing the former Soviet Union and the successor Eurasian states. Emphasis on Soviet and successor understanding of issues, policy options, approaches to implementation. Topics vary.
3 Cr. Spring

Spanish (SPAN)

SPAN 554 Teaching Spanish in the Secondary School
Taken concurrently with student teaching. Application of language learning principles in secondary schools. Selection and presentation of daily and unit lessons. Critique based on the theories discussed in FORL 453. BS capstone course. Cannot be used as an elective in a BA program.
Prereq.: FORL 453 2 Cr. Fall | Spring

SPAN 556 Teaching Spanish in the Elementary School
Application of language learning principles to elementary school instruction.
Development/selection of materials and practice in presenting them. BS Capstone course; cannot be used as an elective in BA program.
Prereq.: FORL 455/555 2 Cr. DEMAND

SPAN 560 Study Abroad
On-site study of selected aspects of language and/or culture of the host country. Final report presented in Spanish.
Prereq.: SPAN 301, SPAN 302 3 Cr. DEMAND

SPAN 561 Internship
Use linguistic ability in work setting in the US or in the host country. Combines learning with an apprenticeship experience. May substitute for 457.
2 Cr. Fall | Spring | Summer

SPAN 571 Commercial Spanish
General business terminology within a business and cultural context. Preparation for a business career in a global market.
Prereq.: SPAN 302, SPAN 331, SPAN 341 3 Cr. DEMAND

Special Education (SPED)

SPED 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SPED 502 Educational Immersion
Multiple aspects of learning and teaching in diverse learners/communities using an immersion

experience in diverse settings.
3 Cr. Summer

SPED 503 Exceptionalities and Human Diversity
Historical and philosophical background, disabling conditions and their implications, legal basis, resources, and advocacy.
3 Cr. Fall | Spring | Summer

SPED 504 Program Overview and E-Portfolio
Overview of the programmatic standards for general and special education, how these standards are integrated in special education curriculum, and e-portfolio requirements for documenting acquisition of the above standards.
1 Cr. Fall | Spring | Summer

SPED 505 Behavior Theories and Practices in Special Education
Assessment and management of behavior problems in the classroom. Functional behavioral assessment, ecobehavioral analysis, cognitive strategies, and crisis prevention.
Coreq.: SPED 338, SPED 339, SPED 418, SPED 445
3 Cr. Fall | Spring | Summer

SPED 508 Developmental Screening and Assessment of Young Children
Philosophy, procedures and methodologies used to conduct developmental screening.
2 Cr. DEMAND

SPED 511 Special Education Procedural Safeguards
Preferral, referral, identification, and placement process; legal and professional aspects. Due process requirements.
Coreq.: SPED 416, SPED 419, SPED 440, SPED 455
3 Cr. Fall | Spring | Summer

SPED 512 Psycholinguistics
Symbolic processes involved in communication. Interpretation of data.
2 Cr. DEMAND

SPED 513 Mathematics for Students with Special Needs
Evaluation, prescription, and management of mathematics instruction for students with mild to moderate disabilities. Skills and competencies for adapting and modifying instructional materials.
3 Cr. DEMAND

SPED 515 Assistive Technology for Students with Special Needs
Classroom use of technology and its direct and indirect impact on the delivery of services for students with disabilities. Commercial and teacher-developed assistive technology and devices used as compensatory tools for students with disabilities.
Coreq.: SPED 338, SPED 339, SPED 405, SPED 418, SPED 418, SPED 445 3 Cr. Fall | Spring | Summer

SPED 516 Individualized Assessment in Special Education
Administration and interpretation of standardized instruments used in the identification of students with developmental disabilities, emotional/behavioral disorders, and learning disabilities.
Coreq.: SPED 411, SPED 419, SPED 440, SPED 455
3 Cr. Fall | Spring | Summer

SPED 518 General Education Literacy Instruction for Special Educators
Basic techniques for reading and language arts diagnosis and teaching in the regular education classroom. 445
Coreq.: SPED 338, SPED 339, SPED 405, SPED 415
3 Cr. Fall | Spring

SPED 519 Literacy Instruction for Students with Special Needs
Adaptive teaching techniques and materials for reading and language arts. Informal assessment including curriculum-based evaluation and instruction.
Prereq.: for SPED Minor: SPED 418 or ED 408 4 Cr.
Fall | Spring

SPED 520 Characteristics of Students with Intellectual & Developmental Disabilities
Characteristics and development of students with intellectual and developmental disabilities including psychosocial, educational, vocational, and leisure outcomes.
3 Cr. Fall | Summer

SPED 521 Characteristics of Students with Learning and Behavior Disorders
Characteristics of and issues related to students with learning and behavior disorders including psychosocial, educational, vocational, and leisure outcomes.
3 Cr. Fall | Spring | Summer

SPED 525 Teaching K-12 Learners with Special Needs

Characteristics and needs of students identified with disabilities or who are "at risk" for failure in general education classrooms. Techniques and strategies to facilitate the inclusion of these students in general education, including instructional modifications, classroom behavior management, promoting social acceptance, and modifying the classroom environment to accommodate learners with special needs.
2 Cr. Fall | Spring | Summer

SPED 531 Collaboration Skills and Transition Planning in Diverse Settings

Analysis and application of various collaboration methods for working with agencies, educational staff and multicultural populations. Students with disabilities in transition from secondary to post secondary environments. Coordination of multiple service agencies in those transitions.
3 Cr. Fall | Spring | Summer

SPED 545 Social and Natural Sciences for Special Educators

Research-supported strategic teaching practices, adaptations and modifications for students with disabilities in content area classes and in oral and written expression, and listening comprehension.
Coreq.: SPED 405, SPED 415, SPED 418, SPED 338, SPED 339 Cr. Fall | Spring

SPED 552 Advanced Methods and Interventions for Students with Mild-Moderate Disab

Examination and application of strategies for elementary-and secondary-age students with mild and moderate disabilities in the areas of autism, developmental cognitive disabilities, emotional or behavioral disorders, learning disabilities, and other health disabilities.
Coreq.: SPED 456 or SPED 656, SPED 457 or SPED 657 3 Cr. Fall | Spring

Student Learning Outcomes

1. Design small-group academic lessons that address learners' needs, attitudes, strengths, and affective concerns 2. Demonstrate effective collaboration practices with general education teachers and staff and assess their own practices 3. Demonstrate skills required to work with paraprofessionals and assess their own practices 4. Design a functional behavioral assessment (FBA) and implement a Behavior Intervention Plan (BIP) for a student in his/her student teaching setting 5. Implement co-teaching strategies in his/her student teaching setting
6. Implement academic and social skills strategies to improve learner outcomes 7. Use technology to support learning and study skills

SPED 553 Practicum in General Education for the Special Educator

Field experiences in general education (elementary/secondary) settings.
Prereq.: SPED 203, SPED 403 - SPED 503 Coreq.: 1-2 Cr. Fall | Spring

SPED 588 Type B Workshops

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SPED 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SPED 601 Trends and Problems in Special Education

Seminar in trends and issues relating to special education services including assessment, service delivery and programming for students with disabilities.
Prereq.: SPED 505, SPED 511, SPED 516, SPED 519, SPED 521 or SPED 520, SPED 531 3 Cr. Fall

SPED 602 Research in Special Education

Techniques and interpretation of research in special education. Problem definition, research design, reporting results and manuscript preparations.
Prereq.: SPED 505, SPED 511, SPED 516, SPED 519, SPED 521 or SPED 520, SPED 531 3 Cr. Fall | Spring

SPED 603 Applied Research in Special Education

Independent research with a faculty mentor. May include qualitative and quantitative research design, policy study, meta-analysis, and portfolio documentation of special education program

standards.
2 Cr.

SPED 611 Learning Strategies for Students with Mild Disabilities

Strategies for upper elementary, junior/senior high, post-secondary mildly handicapped/slow-learning students to aid them in learning to learn, solve problems, and complete tasks independently in regular education classes and other natural environments.
Coreq.: 1-6 Cr. DEMAND

SPED 616 Special Education Program Development for Administrators

Overview and analysis of models, process requirements and indicators or quality for the design, development, implementation, and evaluation of special education programs. Special focus placed on review of the universe of generic program development components necessary to define a quality special education program.
3 Cr. Spring

SPED 623 Learning Environments for Students with Autism Spectrum Disorder

Overview of current research and program planning for students with Autism Spectrum Disorders (ASD). Identification and eligibility criteria, developmental profiles and needs, medical and neurological issues; legal issues; and family/caregiver issues. Grade of B or higher to earn the Autism Certificate.
Prereq.: SPED 2/503 or CSD 560 or CSD 568 or CPSY 630 3 Cr.

SPED 628 Elementary Practicum in Autism Spectrum Disorders

Field internship in elementary school programs for students with moderate/severe autism spectrum disorders.
Prereq.: SPED 623, CSD 624, CPSY 627 2 Cr. Summer

SPED 629 Secondary Practicum in Autism Spectrum Disorders

Field internship in secondary school programs for students with moderate/severe autism spectrum disorders.
Prereq.: SPED 623, CSD 624, CPSY 627 2 Cr. Summer

SPED 645 Seminar: Mildly Handicapped Consultation

Seminar focusing on problems and issues relative to concurrent field experiences in consulation strategies for mainstreamed mildly handicapped students in the elementary and secondary school.
2 Cr. DEMAND

SPED 648 Physical/Health Disabilities Methods

Methods and materials for instructors and programming for students with physical and/or health disabilities; techniques for inclusion.
Prereq.: SPED 505, SPED 511, SPED 516, SPED 521 or SPED 520, SPED 531. 3 Cr. Fall | Spring

SPED 650 Practicum in Physical/Health Disabilities I

Field internship in elementary school programs for students with physical/health disabilities.
3 Cr. DEMAND

SPED 651 Practicum in Physical/Health Disabilities II

Field internship in secondary school programs for students with physical/health disabilities.
3 Cr. DEMAND

SPED 656 Student Teaching in Mild-Moderate Disabilities: Elementary

Field internship in an elementary school program for students with mild-moderate disabilities.
Coreq.: SPED 452 or SPED 552, SPED 657 3 Cr. Fall | Spring

SPED 657 Student Teaching in Mild-Moderate Disabilities: Secondary

Field internship in a middle school or secondary school program for students with mild-moderate disabilities.
Coreq.: SPED 452 or SPED 552, SPED 656 3 Cr. Fall | Spring

SPED 659 Advanced Methods and Interventions: Developmental Disabilities

Examination and application of programming models; methods and materials for the instruction of K-age 21 students with moderate-severe developmental and cognitive disabilities.
Prereq.: SPED 521, SPED 552 3 Cr. Summer

SPED 660 Elementary Practicum in Developmental Disabilities

Field internship in elementary school programs for students with developmental disabiliteis.

Prereq.: SPED 520, SPED 659 Coreq.: SPED 659 2 Cr. Summer

SPED 661 Secondary Practicum in Developmental Disabilities
Field internship in secondary school programs for students with developmental disabilities.
Prereq.: SPED 520 Coreq.: SPED 659 2 Cr. Summer

SPED 669 Advanced Methods and Interventions: Emotional/Behavioral Disorders
Programming models; academic, affective, behavioral, and psychoeducational interventions for K-age 21 students with moderate-severe emotional/behaviorial disorders.
Prereq.: SPED 521, SPED 552 3 Cr. Summer

SPED 670 Elementary Practicum in Emotional/Behavioral Disorders
Field internship in elementary school programs for students with emotional/behavioral disorders.
Prereq.: SPED 521, SPED 545 Coreq.: SPED 669 2 Cr. Summer

SPED 671 Secondary Practicum in Emotional/Behavioral Disorders
Field internship in secondary school programs for students with emotional/behavioral disorders.
Prereq.: SPED 521, SPED 669 Coreq.: SPED 521, SPED 669 2 Cr. Summer

SPED 679 Advanced Methods and Interventions: Learning Disabilities
Examination and application of programming models, methods and materials for the instruction of K-age 21 students with moderate-severe learning disabilities.
Prereq.: SPED 521, SPED 552 3 Cr. Summer

SPED 680 Elementary Practicum in Learning Disabilities
Field internship in elementary school programs for students with learning disabilities.
Prereq.: SPED 521 Coreq.: SPED 679 2 Cr. Summer

SPED 681 Secondary Practicum in Learning Disabilities
Field internship in secondary school programs for students with learning disabilities.
Prereq.: SPED 521, SPED 679 Coreq.: SPED 679 2 Cr. Summer

SPED 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SPED 691 Enrollment Continuation
May be repeated to a maximum of 9 credits.
1 Cr. DEMAND

SPED 692 Selected Topics
Selected topics. May be repeated to a maximum of six credits.
Coreq.: 1-3 Cr. DEMAND

SPED 693 Selected Topics
May be repeated to a maximum of 9 credits.
Coreq.: 1-3 Cr. DEMAND

SPED 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SPED 695 Temporary Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

SPED 696 Selected Topics
May be repeated to a maximum of 9 credits.
Coreq.: 1-3 Cr. DEMAND

SPED 697 Selected Topics
Selected topics. May be repeated to a maximum of six credits.
Coreq.: 1-3 Cr. DEMAND

SPED 698 Field Study
Field study.
Coreq.: 1-6 Cr. Fall | Spring | Summer

SPED 699 Master's Thesis
Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Statistics (STAT)

STAT 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-4 Cr. Fall | Spring | Summer

STAT 515 Data Mining

Data mining principles and applications. Predictive modeling techniques for large data sets include classification and regression trees, logistic regression, neural networks, random forests and boosted trees. Handle missing values and outliers. Compare models and deploy best model to predict new data. Hands-on use of data mining software.
Prereq.: STAT 321 3 Cr. Spring

Student Learning Outcomes
1. Students will be able to explore large data sets graphically to better understand the data.
2. Students will be able to describe data mining principles.
3. Students will be able to explain the history of data mining and today's important applications.
4. Students will be able to choose and apply appropriate predictive modeling techniques.
5. Students will be able to use data mining software.

STAT 517 Applied Probability and Simulation
Probability distributions and random variables, simulation of random variates, probability modeling, applications to Markov chains, queueing models, reliability and survival; use of software.
Prereq.: One programming course and MATH 211 or equivalent 3 Cr. Spring

STAT 518 Advanced SAS Programming
Mechanics of Macro Processing, Macro variables, Macro programs, Macro Programming Language elements and techniques, storage and reuse of macros, interfaces to macro facility, SQL procedure. Applications to data query, retrieval, and sundry manipulation.
Prereq.: STAT 304 3 Cr. Fall

STAT 521 Applied Regression Methods
Advanced regression methods focused on complex real-world data. Model checking and diagnostics, model building, transformations, polynomial regression, logistic regression, general linear models, nonparametric regression methods.
Prereq.: STAT 321 3 Cr. Spring

STAT 524 Statistical Design for Process Improvement
A study of statistically designed experiments which have proven useful in product development and process improvement; topics include randomization, blocking, factorial treatment structures, fractional factorial designs, screening designs, Taguchi methods, response surface methods; use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

STAT 527 Applied Time Series
A study of the most useful techniques of analysis and forecasting using time series data. Topics include an introduction to forecasting, time series regression, decomposition methods, smoothing, smoothing techniques, basic techniques of Box-Jenkins methodology; use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

STAT 530 Multivariate Statistical Methods
Principal component analysis, factor analysis, discriminant analysis, cluster analysis, manova, profile analysis, repeated measures; applications and use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

STAT 533 Nonparametric Statistics
Efficiency comparison of mean and median, one and two sample location problems, effect of alternative score functions, randomization and permutation tests, the independence problem, and selected problems in regression. Use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

STAT 536 Applied Categorical Data Analysis
Introduction to the analysis of discrete data; log-linear models for two-way and multi-way tables; linear logistics regression models; association models and models of symmetry; applications, use of statistical software.
Prereq.: STAT 321 3 Cr. DEMAND

STAT 540 Topics in Statistics
Study of modern topics in theoretical or applied statistics.
3 Cr. Spring

STAT 542 Business Statistics
Numerical and graphical descriptive statistics and inferential procedures. Selected statistical topics with major emphasis on applications in business.
Coreq.: Cr. Fall

STAT 547 Basic Elements of Probability Theory
A more mathematical treatment of probability distributions than STAT 417. Probability concepts and laws; sample spaces, combinations and permutations, Bayes' theorem, discrete and continuous random variables, expected value, distribution of functions of random variables, two-

demensional variates, central limit theorem; T, F, and chi-square distributions;
Prereq.: MATH 320 or MATH 321 3 Cr. Fall

STAT 548 Basic Elements of Statistical Theory
Theory of estimation and hypothesis testing; maximum likelihood, method of moments, likelihood ratio tests; elementary mathematical functions illustrate theory.
Prereq.: STAT 447 or STAT 547 3 Cr. Spring

STAT 588 Type B Workshops
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

STAT 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

STAT 615 Data Mining for Analytics
Data mining principles and applications. Predictive modeling techniques for large data sets include classification and regression trees, logistic regression, neural networks, random forests and boosted trees. Handle missing values and outliers. Compare models and deploy best model to predict new data. Extensive hands-on use of data mining software.
Prereq.: STAT 242 or equivalent 3 Cr. Spring

Student Learning Outcomes
1. Students will be able to explore large data sets graphically to better understand the data.
2. Students will be able to describe data mining principles.
3. Students will be able to explain the history of data mining and today's important applications.
4. Students will be able to choose and apply appropriate predictive modeling techniques.
5. Students will be able to use data mining software.

STAT 617 Statistical Theory
Probability and univariate distributions, binomial, Poisson, gamma, normal distributions, multivariate distributions, distributions of functions of random variables, limiting distributions, significance tests, estimation.
3 Cr. Fall

STAT 618 Survival Analysis
Estimation of survival probabilities, families of two-sample rank tests, distribution functions for failure times, Cox regression model, proportional hazards model, graphical and other methods for assessing model adequacy, Poisson regression models, competing risks, meta-analysis.
Prereq.: STAT 321 3 Cr. Spring

STAT 619 Generalized Linear Models
Likelihood theory, exponential families, model specification, model checking and diagnostics, logistic and ordinal regression, log linear models, gamma regression models, generalized estimating equations, and generalized linear mixed models.
Prereq.: STAT 321 3 Cr. Fall

STAT 620 Bayesian Data Analysis
Prior distributions, Bayesian statistical models, parameter estimation, Markov Chain Monte Carlo, hierarchical models, model checking, hierarchical regression.
Prereq.: STAT 548, STAT 617 3 Cr. DEMAND

STAT 621 Design and Analysis of Experiments
Review of fundamentals of Experimental Design. Randomized complete and incomplete block designs. Latin squares and rectangles, Graeco-Latin Squares designs. Designs for cross-over trials. Cyclic, alpha and Lattice Designs. Incomplete block designs with factorial treatments. Confounding. Franctional replication in factorial designs.
Prereq.: STAT 521 3 Cr. DEMAND

STAT 649 Statistical Consulting
Provide statistical consulting for clients from other departments. Assist client in design of experiment, summarization of data, data analysis and interpretation of results.
Prereq.: STAT 518, STAT 521 2 Cr. Fall | Spring

STAT 650 Statistics Seminar
Student presentations of current research in applied statistics.
1 Cr. Spring

STAT 660 Data Visualization for Analytics
Explore visual representations of data for exploratory analysis. Traditional and contemporary visual techniques to improve the understanding and communication of complex data. Good design practices for visualization and presentation of analytics. Extensive use of software.

Prereq.: One of: STAT 219, STAT 239, STAT 242, STAT 353. 3 Cr. Spring

Student Learning Outcomes
1. Recommend, construct, and interpret appropriate visualizations for various types of data.
2. Evaluate appropriate analysis techniques using visual representations.
3. Organize and communicate complex information concisely using data visualization.

STAT 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

STAT 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

STAT 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

STAT 695 Temporary Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

STAT 699 Thesis

Coreq.: 1-6 Cr. Fall | Spring | Summer

Teacher Development (ED)

ED 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ED 502 Educational Immersion
Multiple aspects of learning and teaching in diverse learners/communities using an immersion experience in diverse settings.
3 Cr. Summer

ED 521 Foundations of Education
Historical, philosophical, political, ideological, and sociological issues and dimensions of American education. Education in a democracy, issues of equity, constitutional considerations, and development of an educational philosophy.
Prereq.: Admittance to Teacher Education, ED 300, EDR 361, IM 422, HURL 497, HURL 498, ED/ENGL 460 and SPED 425 Coreq.: ED 431, ED 441 2 Cr. Fall | Spring

ED 523 Topics in Education
Intensive study of a special topic in education. May be repeated up to 3 credits.
Coreq.: 1-3 Cr. DEMAND

ED 524 Mainstream Science & Social Studies for the Special Educator
Overview of planning, selecting resources, scope and sequence of curriculum, responding to individual learner needs, and evaluating student learning in the teaching of science and social studies.
3 Cr. DEMAND

ED 531 Curriculum, Instruction and Assessment
Curriculum, instruction and assessment in the PreK-12 setting. Inclusive and responsive approaches for middle level and high school classrooms. Teacher identity; creating safe learning communities; complex, student-centered lesson design with varied instruction; interdisciplinary curricula; and authentic assessment.
Prereq.: Admittance to Teacher Education, ED 300, EDR 361, IM 422, HURL 497, HURL 498, ED/ENGL 460 and SPED 425 Coreq.: ED 421, ED 441 2 Cr. Fall | Spring

ED 537 Principles of Middle Level Education
Provides a comprehensive look at middle level education, including its historical development, its goals and philosophy, its mission. Middle level organizational patterns, curricular structures, specific instructional strategies and assessment/evaluation methods and diversity of learners will be addressed.
Coreq.: ED 547 3 Cr. Fall | Spring

ED 541 Integrating Theory & Practice:Inclusive & Responsive Teaching for All
Merging theory and practice for developing inclusive and responsive curriculum, instruction and assessment in the preK-12 setting during an in-depth field experience. Active involvement in classrooms includes working with ESL, special education and/or

other historically under-served students.
Prereq.: ED 300, CEEP 361, IM 422 Coreq.: ED 421, ED 431 1 Cr. Fall | Spring

ED 547 High School Education

Provides a comprehensive look at high school education including its historical development, its goals and philosophy and its mission. High school organizational patterns, curricular structures, specific instructional strategies and assessment/evaluation methods, and diversity of learners will be addressed.
Coreq.: ED 537 3 Cr. Fall | Spring

ED 549 Multicultural Teaching: Viewpoints, Rationale, Strategies

Examines viewpoints on multicultural teaching from historical, national, and current global perspectives. Presents models for curricular change to meet accreditation standards in public schools. Focuses on implementation strategies.
3 Cr. Fall

ED 551 Literacy in the Content Areas

Literacy applied to content area learning: instructional strategies to develop vocabulary and promote comprehension, assessment techniques to guide instructional planning, and dispositions for content literacy professionals.
Prereq.: ENGL 460; SPED 425 Coreq.: ED 421/521, ED 431/531, ED 441/541 2 Cr. Fall | Spring

Student Learning Outcomes

1. Articulate a personal understanding of literacy, its role in student learning, and the role of the content area teacher in promoting student learning through the application of literary strategies.
2. Identify and apply the strategies used to assess and build student prior knowledge.
3. Plan direct and indirect vocabulary instruction to enhance student understanding of general and domain specific word knowledge.
4. Develop and implement effective vocabulary strategies for student learning in content area.
5. Demonstrate the appropriate applications of a wide variety of instructional strategies that promote student comprehension in understanding text, content materials, lectures, and demonstrations.
6. Communicate an understanding of and demonstrate the ability to accommodate the literacy/learning needs of readers of varying proficiency and developmental levels and linguistic backgrounds.
7. Articulate the role and rationale for using literature, electronic texts and non-print materials across the curriculum.
8. Apply appropriate measurement systems and proper interpretation of assessment tools to determine individual students' reading levels and comprehension abilities.
9. Apply assessment data to set goals and objectives, make effective instructional decisions, and demonstrate responsiveness to students' needs.
10. Identify and describe the role of collaboration with school colleagues in meeting the needs of diverse learners and struggling learners.

ED 553 Microcomputers in Programs for Young Children

Specially designed for prekindergarten through grade one educators who wish to use the microcomputer effectively as a learning tool with children focus on developing and using instructional strategies for: 1) using the microcomputers with young children to develop/reinforce cognitive skills and individual learning styles; 2) selecting and integrating software for classroom use (curriculum) and for administrative uses (record keeping, grading, and parent communication).
3 Cr. Spring

ED 557 Issues in Bilingual/Bicultural Education

Examines current issues in Bilingual/Bicultural education from historical, political, and social dimensions. This course prepares future ESL and Bilingual teachers to examine current issues and curriculum decisions that affect the bilingual/bicultural student.
3 Cr. Fall | Spring | Summer

ED 558 Literacy for L-2 Learners

Examines socio-psycholinguistic process of second language literacy learning. Focuses on speech and print relationships, literacy emergence, strategies for teaching/writing development and intergration of language and literacy across the curriculum. K-12
3 Cr. Summer

ED 559 Critical Pedagogy

Intended to introduce educators to current issues/concepts related to critical pedagogy. This course will examine theoretical frameworks and introduce current research in the field of critical pedagogy. Educators will examine how critical pedagogy as a philosophy impacts learners at all

levels especially those from diverse populations.
3 Cr. DEMAND

ED 560 Teaching English Language Learners in K-12

Theory and methods for English Language Learners and bilingual education for non-ESL and non-bilingual teachers. Issues for English Language Learners and instructional strategies.
2 Cr. Fall | Spring | Summer

ED 564 5-12 Student Teaching I

Supervised teaching for students seeking 5-12 teacher licensure. Permission required.
6 Cr. Fall | Spring

ED 565 5-12 Student Teaching II

Supervised teaching for students seeking 5-12 teacher licensure. Permission required.
6 Cr. Fall | Spring

ED 568 PreK-12 Student Teaching I

Supervised teaching for students seeking PreK-12 teacher licensure. Permission required.
6 Cr. Fall | Spring

ED 569 PreK-12 Student Teaching II

Supervised teaching for students seeking PreK-12 teacher licensure. Permission required.
6 Cr. Fall | Spring

ED 571 Reading: Analysis and Correction of Disabilities in the Classroom

Causes of reading difficulties, procedures to diagnose and correct them.
3 Cr. Spring

ED 572 Content Area Reading for Middle and Secondary Schools

Nature of high school and middle school reading programs, development of reading techniques and skills, development of vocabulary, reading interests, and reading ability in content fields, appraisal of reading abilities, diagnosis and remediation.
3 Cr. DEMAND

ED 573 Reading and Children's Literature: Current Issues

An issues approach to examination of contemporary literature, its relationship to development of comprehension and critical thinking.
3 Cr. DEMAND

ED 582 Multicultural Child

Learning styles of Afro-American, Native American, Asian-American, and Latino-American children.
3 Cr. DEMAND

ED 583 Black English: Teaching Black Children to Read

How Black English causes problems when Black and Latino students start to read and write.
3 Cr. DEMAND

ED 588 Type B Workshop

Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ED 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ED 601 Selected Topics in Education

Course designed for intensive study of a special topic in education. Topic will be announced in the class schedule. May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. DEMAND

ED 606 Classroom Management

Problems arise in classrooms managed by both veteran and inexperienced teachers. Establishing and teaching classroom rules that are just having a consistent approach continue to be the bases of effective management. This course explores a variety of methods and approaches that enable teachers to help students meet their needs and behave more appropriately. Emphasis is on the prevention of problems through effective, proactive management.
3 Cr. DEMAND

ED 607 Judicious Discipline

Combines reasonable approaches to school discipline as part of a sound civics education. Incorporates constitutional considerations in a

democracy in conjunction with the school's obligations to humaneness and a safe and supportive setting.
3 Cr. Summer

ED 608 Children's Rights
An analysis of the changing status of children-their rights, roles and responsibilities.
3 Cr. DEMAND

ED 610 Introduction to Curriculum and Instruction
Overview of the graduate program in Curriculum and Instruction. Interpreting educational research.
3 Cr. Fall | Summer

ED 611 History and Philosophy of Education
Historical and philosophic aspects of educational theory; beliefs; arguments; assumptions. Surveys major currents, movement, and intellectual contributors to western and non-western educational thought.
3 Cr. Fall | Spring | Summer

ED 612 Social and Cultural Foundations of Education
Interrelationship of education and economic, political, social, and cultural systems; critical perspectives on schools as agencies of socialization and social stratification in a democratic and pluralistic society; comparative education.
3 Cr. Fall | Spring | Summer

ED 614 Action Research
This course will focus on how teachers can use Action Research as a vehicle in understanding the culture and dynamics of their classroom. Action Research aims at helping educators reflect on their own classroom practices and how these practices may affect the needs of their students, especially within a diverse population.
3 Cr. DEMAND

ED 615 Methods of Educational Research
An introduction to the assumptions, purposes, strategies, interpretation, and reporting of quantitative and qualitative research in education.
3 Cr. Fall | Spring | Summer

ED 616 Reading Development and Language Acquisition
K-12 reading and language development. Strategies that develop reading skills and promote appreciation of reading in all students especially those who find reading difficult.
3 Cr. DEMAND

ED 617 Informational Reading and Writing
Develop teaching strategies to assist students (K-12) in exploring and learning about their world through informational reading and writing.
3 Cr. DEMAND

ED 618 Reading Assessment K-12
Assessment in reading instruction, methods and tools to facilitate assessment, formal and informal reading assessment strategies are examined, applied and critiqued.
3 Cr. DEMAND

ED 619 Struggling Readers: Analysis & Assistance
This course fosters teachers' abilities to look closely and critically at students' reading abilities, identify specific strengths and weaknesses, and plan and implement a well considered and appropriate instructional program.
3 Cr. DEMAND

ED 620 Administration and Supervision of the Reading Program
Leadership role of reading specialist, needs assessment, professional development, selecting and evaluating materials, state and federal legislation, and budgets.
3 Cr. DEMAND

ED 621 Intro, Research, Assessment and Methods for Post-Sec/Adult Reading
Theories and strategies appropriate for teaching reading to adults in the post-secondary setting; examines assessment, learning styles, teaching and learning technologies, and teaching styles; racial, age, and gender diversity in the post-secondary setting.
2 Cr. DEMAND

ED 622 Writing Methods and Practicum for Post-Secondary/Adult Learners
Theories and strategies appropriate for teaching writing to adults in a post-secondary setting. Assessments, teaching and learning technologies, and diversity strategies in the post-secondary setting. Includes practicum in a literacy class in a post-secondary setting.
Prereq.: ED 621 2 Cr. DEMAND

ED 627 Education of the Emerging Adolescent
In-depth look at emerging adolescent development; history and major components of middle level education; how to create developmentally responsive education for diverse early adolescent learners.
3 Cr. DEMAND

ED 630 Kindergarten/Primary Education
The organization and implementation of developmentally and socially appropriate primary grade classrooms in formal educational settings. How to build the base for future school learning while making the transition from the family to the school.
3 Cr. DEMAND

ED 631 Literacy Through Literature for K-8 Schools
Explore children's books and examine strategies and techniques for effectively utilizing literature in children's literacy development. Literature response activities and the use of literature across the curriculum will be studied.
3 Cr. DEMAND

ED 633 Writing in the Elementary School
Exploration of how children develop as writers. Techniques for facilitating growth in writing will be examined and experienced. The connections between writing in and out of the classroom and across the curriculum will be studied.
3 Cr. DEMAND

ED 637 Cooperative Learning K-12+
Structuring small groups successfully includes: applied theory, various cooperative strategies, interpersonal skills, diversity issues, and assessment strategies through practical application across the curriculum K-12+. Beginning through advanced levels.
3 Cr. DEMAND

ED 638 Classroom Controversy, Conflict & Mediation
Cooperative theory and strategies for resolving academic controversies and interpersonal conflict which increase comprehension, problem solving and conflict resolution through negotiation/peer mediation. Practical application K-12+.
3 Cr. Spring

ED 641 Middle Level Curriculum
Provides an in-depth look at middle level curriculum, grades 5-8. Separate-subjects, multidisciplinary and integrative approaches to curriculum will be explored. The role of action research in curriculum development will also be highlighted.
3 Cr. DEMAND

ED 643 Elementary School Science
Activities and procedures for improving instruction in science; current standards for elementary science education; analysis and evaluation of literature, research findings, and curriculum materials in the science curriculum.
3 Cr. DEMAND

ED 644 Teaching Elementary School Mathematics
Teachers will improve their instruction of K-8 mathematics with a focus on recent trends, research, and national and state standards for teaching mathematics. Technology and authentic, developmentally appropriate activities will enhance understanding and confidence in teaching and learning mathematics.
3 Cr. DEMAND

ED 647 Curriculum: Theory and Development
Foundations, development and assessment of curriculum. Influences on definition of curriculum and reform. PreK-16.
3 Cr. Fall | Summer

ED 648 Child Centered Curriculum
This course examines child centered curriculum from a philosophical and historical perspective. Teachers and other educators will examine child centered models and create curriculum relevant to their situations.
3 Cr. DEMAND

ED 650 Integration Through Inquiry
Models of inquiry, strategies for facilitating inquiry in the classroom, and direct experiences with conducting interdisciplinary inquiry projects.
3 Cr. DEMAND

ED 651 Middle School Instruction Seminar
In-depth review of literature on theory and practice of middle school instructional and assessment techniques.
3 Cr. DEMAND

ED 652 Reading for Middle/High School Teachers

The reading/writing processes; techniques for maximizing student performance on reading/writing tasks in classrooms: techniques for improving reading/writing abilities of students of all ability levels; techniques for in-class assessment and remediation; ideas for integrating literature/writing into content area curriculum.
3 Cr. Fall | Spring | Summer

ED 654 Instruction and Assessment
Investigation, application, analysis and evaluation of instruction. Includes models and strategies of teaching, the research base, implementation, staff development and peer review.
3 Cr. Fall | Spring | Summer

ED 655 Critical Thinking- Theory into Practice
An analysis of critical thinking and current brain theory. The theoretical framework provides the basis for the creation of learning experiences designed to cultivate critical thinking by learners.
3 Cr. DEMAND

ED 656 Dimensions of Learning and Teaching
Research based practical strategies to create learning centered instruction, curriculum and assessment. A Prek-12+ framework for planning and implementation. Review of current literature and programs.
3 Cr. Summer

ED 657 Classroom-Computer Curriculum and Methods
An overview for teachers of instructional computer applications in the classroom; methods for integrating use; the selection, design, or construction of computer-based curriculum; software content evaluations; and related research findings.
3 Cr. Spring | Summer

ED 658 Technology with a Keyboarding Base
Elementary teachers will become familiar with keyboarding methods, including psychomotor learning principles. Keyboarding will be the base for learning other applications of computers in the elementary classroom.
3 Cr. DEMAND

ED 659 Enhancing Elementary Curriculum With Technology
K-8 teachers will develop an understanding of the variety of ways curriculum content and instruction can be improved utilizing teaching and learning strategies including technology in the following areas: Elementary Keyboarding, Children's Literature & Reading, Mathematics & Science, and Social Studies. Development and analysis of content projects.
3 Cr. Fall | Summer

ED 660 Active Assessment
Strategies for assessing, documenting, and reporting student learning to aid instructional decision making and communication with parents. Some topics to be included are: (uses of) teacher observations, checklists, rubrics, miscue analysis, clinical interviews, writing assessments, portfolios, error diagnosis, performance assessments, questionnaires, drawings, constructions, experiments, notebooks and lab reports, embedded assessments, authenic assessments, and hypothesis testing measurements.
3 Cr. DEMAND

ED 671 Mentoring and Supervision
Continued professional growth as a teacher is enhanced by appropriate supervision and mentoring in connection to preservice programs, during the induction year, and throughout one's career. This course provides the theory and practice essential for effective mentoring and supervision of both beginning and experienced teachers.
3 Cr. DEMAND

ED 682 Teachers and Change
Change in education is necessary. However, because schools are complex organizations, long-lasting change is often difficult to implement and maintain. This course investigates the change process in organizations, the political/societal context for change, and how teachers can become active participants in change. Both change theory and practice will be addressed.
3 Cr. DEMAND

ED 683 Achieving Gender Equity in Education
Hands on strategies to achieve gender equity. Understanding intersection of race, class, and gender in curriculum and instruction. Assessment of existing level of equity; development of specific interventions.
3 Cr. DEMAND

ED 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ED 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

ED 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ED 695 Temporary Workshop
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

ED 698 Starred Paper
Working through the process of writing a starred paper format, data collection, analysis, various research models.
Coreq.: 1-3 Cr. DEMAND

ED 699 Thesis
Support and guidance provided by advisor as student works to complete thesis.
Coreq.: 1-6 Cr. DEMAND

Theatre (TH)

TH 501 Credit By Arrangement
Credit By Arrangement.
Coreq.: 1-3 Cr. Fall | Spring | Summer

TH 544 Internship in Theatre
In-residence training with a cooperating professional theatre. A maximum of 6 credits may be used toward major; none toward minor. Permission of department.
Coreq.: 3-6 Cr. DEMAND

TH 548 Acting III
Specific styles of acting, such as period styles, Suzuki, outside-in, improvisation, etc. May be repeated up to 6 credits.
Prereq.: TH 248 3 Cr. DEMAND

Student Learning Outcomes
1. Perform acting techniques from a specific acting style.
2. Analyze characters using techniques from a specific acting style.
3. Develop body awareness for movement style.
4. Research periods or techniques of acting.

TH 549 Directing II
Advanced directing techniques.
Prereq.: TH 349 3 Cr. Even Fall

TH 565 Topics in Theatre
Selected subjects in theatre such as technical processes, acting styles, playwrights, and dramaturgy. May be repeated without repetition of content to a maximum of 9 credits.
3 Cr. DEMAND

Student Learning Outcomes
1. Research mannerisms and conventions of various styles of acting.
2. Perform scenes from classical Western drama or non-Western drama.
3. Evaluate their own and others' scenes in terms of acting style and playwright's message.
4. Analyze the audiences (societies or cultures) for whom the plays were intended.
5. Describe the cultural and historical context of plays written by significant women playwrights.
6. Compare/contrast themes and structure of plays written by women.
7. Write about and discuss dramatic theories of women playwrights.
8. Describe contributions of women playwrights to theatre studies.
9. Demonstrate familiarity with both household and professional (acid and/or fiber-reactive) dyes and successfully execute an advanced dye technique (tie-dye, ombre or itajimi).
10. Successfully and realistically age and distress a garment.

TH 570 Theatrical Design/Lighting II
Thrust, arena, and quasi-theatrical lighting techniques.
Prereq.: TH 342 3 Cr. Even Spring

TH 581 Theatre History I
Theatre from its origins to the mid-nineteenth century.
Prereq.: TH 198, TH 230, TH 236 3 Cr. Odd Fall

TH 582 Theatre History II
Theatre from the mid-nineteenth century to the present day.
Prereq.: TH 198, TH 230, TH 236 3 Cr. Even Spring

TH 588 Television Course
Exact nature of the course to be offered on television will be defined by the department.
Coreq.: 1-3 Cr. Fall | Spring | Summer

TH 589 Directing III
Culminating project directed for public viewing.
Prereq.: TH 349, TH 449 3 Cr. Odd Spring

Student Learning Outcomes
1. Select a play based on critical judgment of good dramatic literature.
2. Cast from public auditions.
3. Develop rehearsal schedules and keep records of activities accomplished in rehearsals.
4. Participate in all technical rehearsals showing a positive attitude to actors, technicians, and other directors.
5. Evaluate their own productions as well as other students' productions from a director's viewpoint.

TH 593 Advanced Script Analysis
In-depth analysis of contemporary dramatic literature. Significant writing component.
Prereq.: TH 198 3 Cr. Spring

Student Learning Outcomes
1. Recognize drama that contains post-modern ideas, structures, and style.
2. Write about and discuss post-modern dramatic theories.
3. Write about and discuss the origins of avant-garde drama.
4. Write about and discuss the international cultures that produced avant-garde drama.
5. Write about and discuss the connections between American avant-garde drama and other cultures.

TH 596 Summer Theatre
Theatre production for advanced students. Experience in acting, directing, costuming, construction, promotion, lighting and other disciplines during the summer season. Registration by application only.
Coreq.: 1-6 Cr. Summer

TH 600 Special Problems
Independent study for advanced students wishing to work out a special problem in the major area of concentration.
Coreq.: 1-3 Cr. Fall | Spring | Summer

TH 690 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

TH 691 Enrollment Continuation
Intended for master's students who have completed all required coursework for a graduate program, but are still working on a culminating project (thesis, starred paper, portfolio, or internship) or other program requirements. Repeatable to 10 credits.
1 Cr. Fall | Spring | Summer

TH 694 Selected Topics
May be repeated to a max. of 9 credits.
Coreq.: 1-3 Cr. Fall | Spring | Summer

TH 695 Temporary Workshops
Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option.
Coreq.: 1-3 Cr. Fall | Spring | Summer

TH 699 Master's Thesis
Master's Thesis.
Coreq.: 1-6 Cr. Fall | Spring | Summer

Traffic Safety Education (TSE)

TSE 501 Credit By Arrangement
Credit By Arrangement.
0 Cr. Fall | Spring | Summer

TSE 530 Seminar: Topical Traffic Safety
Contemporary traffic safety issues, such as accident prevention and community involvement. May be repeated topically.
0 Cr. DEMAND

TSE 540 Driving Task Analysis
Risk perception and risk management, the decision making process, and the influencing factors of attitude, motivation and chance as related to accident causation. Defensive driving principles and crash avoidance tactics explored.
3 Cr. Fall | Spring | Summer

TSE 544 Internship: General

0 Cr. DEMAND

TSE 550 Methods of Classroom Instruction

Basic analysis of the driving task. Teaching techniques, applications and methodology of classroom high school driver education. Defensive driving principles and theory. Classroom laboratory teaching included.
3 Cr. Fall | Spring | Summer

TSE 553 Emergency Driving Techniques

Organization and administration of program development. All phases of emergency driving instruction. Additional assignments are required in all 500 level classes, determined by the instructor.
1 Cr. DEMAND

TSE 555 Workshops: Special Topics Traffic Safety

Specific strategies for promoting quality driver education will be identified. May be repeated three times.
0 Cr. DEMAND

TSE 556 Improving Driver Education Instruction

Assists driver education instructors to improve the driving of their students. Risk management. Additional assignments are required in all 500 level classes, determined by the instructor.
3 Cr. DEMAND

TSE 564 Workshop: Kids Teaching Kids

Role of an adviser in the "Kids Teaching Kids" elementary traffic safety program. The influence of peers, development of healthy attitudes, and making responsible decisions. Preparation of sixth grade peer leaders.
1 Cr. Spring

TSE 570 Methods of In Car Instruction

Application of educational techniques in the laboratory phase of driver education. Laboratory teaching experience included.
Coreq.: AVIT 480-580 3 Cr. Fall | Spring

TSE 580 In Car Instruction Practicum

Driver education principles of in-car teaching techniques. Behind the wheel laboratory teaching experience.
Coreq.: AVIT 470-570 1 Cr. Fall | Spring

TSE 590 Issues in Driver Education

History and origins of high school driver education, recent trends and issues affecting high school driver education programs. Role-played by public and private agencies and organizations in setting expectations and standards for high school driver education. Administrative tasks required of the Driver Education coordinator. Internet chat activity and self paced readings and writings required.
Prereq.: TSE 440-540, TSE 450-550, TSE 470-570, TSE 480-580, or DE licensed 3 Cr. Fall | Spring

TSE 600 Special Problems

Independent study for advanced students wishing to work out a special problem in the major area of concentration.
0 Cr. Fall | Spring | Summer

TSE 694 Selected Topics

May be repeated to maximum of 9 credits.
0 Cr. Fall | Spring | Summer

TSE 699 Master's Thesis

0 Cr. Fall | Spring | Summer

Colleges & Schools

College of Liberal Arts

111 Kiehle Visual Arts Center
(320) 308-3093
cla@stcloudstate.edu
www.stcloudstate.edu/cla

Departments

Anthropology
Communication Studies
English
Ethnic, Gender and Women's Studies
History
Languages and Cultures
Mass Communications
Philosophy
Psychology
Sociology

College Level Programs

Religious Studies
Global Studies

College of Liberal Arts Accreditations

- The mass communications department is accredited by the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC).
- The Applied Sociology concentration in the Department of Sociology and Anthropology is accredited by The Commission on Applied and Clinical Sociology (CACS).
- All College of Liberal Arts teaching licensure programs (Communication Arts and Literature, English, French, German, Spanish, History, Art and Music Education) are accredited by the National Council for Accreditation of Teacher Education (NCATE) and the Minneosta Board of Teaching.

- School of the Arts

(Embedded within the College of Liberal Arts)

107-1 Kiehle Visual Arts Center
(320) 308-4716
www.stcloudstate.edu/sota

Departments

Art
Music
Theater and Film Studies

School of the Arts Accreditations

- St. Cloud State University is an accredited institutional member of the National Association of Schools of Arts and Design (NASAD).
- The music department is accredited by the National Association of Schools of Music (NASM).

- St. Cloud State University is an accredited institutional member of the National Association of Schools of Theatre.
- The Bachelor of Arts program in Theatre is accredited by the National Association of Schools of Theatre (NAST).

College of Science and Engineering

145 Robert H. Wick Science Building
(320) 308-2191
cose@stcloudstate.edu
www.stcloudstate.edu/cose

Departments

Biology
Chemistry and Biochemistry
Mathematics and Statistics
Physics and Astronomy

College of Science and Engineering Accreditations

- All College of Science and Engineering teaching licensure programs (Biological Sciences, Chemistry, Physics, Mathematics and Technology Education) are accredited by the National Council for Accreditation of Teacher Education (NCATE) and the Minnesota Board of Teaching.
- The chemistry program is approved by the American Chemical Society.

- School of Computing, Engineering and Environment

(Embedded within the College of Science and Engineering)

145 Robert H. Wick Science Building
www.stcloudstate.edu/scee

Departments

Computer Science and Information Technology
Atmospheric and Hydrologic Sciences
Electrical and Computer Engineering
Environmental and Technological Studies
Mechanical and Manufacturing Engineering

School of Computing, Engineering & Environment Accreditations

- The Bachelor of Science in Computer Science, offered by the Computer Science Department, is accredited by the Computing Accreditation Commission (CAC) of ABET, http:www.abet.org. The Bachelor of Science major also follows the Association for Computing Machinery (ACM) guidelines on curriculum.
- The atmospheric and hydrologic sciences department provides a meteorology program which meets the standards set forth by the American Meteorological Society and the National Weather Service.
- The Bachelor of Science in Electrical Engineering, and the Bachelor of Science in Computer Engineering, offered by the Electrical and Computer Engineering Department, are accredited by the Engineering Accreditation Commission (EAC) of ABET, http://www.abet.org.
- The Technology Education degree is accredited by the International Technology and Engineering Educators Association (ITEEA) and the Council of Technology Teacher Education (CTTE).

- The Mechanical and Manufacturing Engineering Department offers a Bachelor of Science in Manufacturing Engineering and Mechanical Engineering that are accredited by the Engineering Accreditation Commission (EAC) of ABET, http://www.abet.org.
- The master's program of engineering management in the Mechanical and Manufacturing Engineering Department is certified by the American Society of Engineering Management (ASEM).

Herberger Business School

118 Centennial Hall
(320) 308-3213
hbs@stcloudstate.edu
www.stcloudstate.edu/hbs

Departments

Accounting
Finance, Insurance and Real Estate
Information Systems
Management and Entrepreneurship
Marketing

Herberger Business School Accreditations

- The Herberger Business School is accredited by the AACSB International, the Association to Advance Collegiate Schools of Business at both the bachelor's and master's degree levels.

School of Education

A110 Education Building
(320) 308-3023
soe@stcloudstate.edu
www.stcloudstate.edu/soe

Departments

Child and Family Studies
Educational Leadership and Higher Education
Human Relations and Multicultural Education
Information Media
Special Education
Teacher Development

School of Education Accreditations

- The School of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE).
- All teaching licensure programs are approved by the Minnesota Board of Teaching.
- The Educational Administration programs in the Department of Educational Leadership and Administration are approved by the Minnesota Board of School Administrators (MBSA).

School of Public Affairs

Stewart Hall 365-A
(320) 308-4790
www.stcloudstate.edu/sopa

Departments

Criminal Justice
Economics
Geography and Planning
Political Science

School of Public Affairs Accreditations

- The Land Surveying and Mapping Science degree program in the Department of Geography and Planning is accredited by the Applied Science Accreditation Commission (ASAC) of ABET, www.abet.org.
- The School of Public Affairs teaching licensure program (Social Science Teaching) is accredited by the National Council for Accreditation of Teacher Education (NCATE) and the Minnesota Board of Teaching.

School of Health and Human Services

215 Brown Hall
(320) 308-4894
shhs@stcloudstate.edu
www.stcloudstate.edu/shhs

Departments

Communication Sciences and Disorders
Community Psychology, Counseling and Family Therapy
Gerontology
Kinesiology
Medical Lab, Nuclear Medicine & Radiologic Technology
Nursing Science
Social Work

School of Health and Human Services Accreditations

- The communication sciences and disorders program is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology.
- The College Counseling and Student Affairs Program is accredited by the Council of Accreditation of Counseling and Related Education Programs (CACREP).
- The Applied Behavior Analysis program in the Department of Counseling and Community Psychology is accredited by the Association for Behavior Analysis (ABA).
- The Marriage and Family Therapy Program in the Department of Counseling and Community Psychology is approved by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE).
- The master's program in rehabilitation counselor education in the Department of Counseling and Community Psychology is accredited by the Council on Rehabilitation Education.
- The School Counseling Program is accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP).
- The Bachelor of Science in Nursing is accredited by the Commission on Collegiate Nursing Education (CCNE) and approved by the Minnesota Board of Nursing.
- Athletic Training Education Program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE).
- The Social Work Department is accredited by the Council on Social Work Education.

All Departments/Academic Units

Accounting

Chairperson: Kerry Marrer
Address: 442 Centennial Hall
Phone: 320.308.3038
Email:acct2B@stcloudstate.edu
Website:www.stcloudstate.edu/accounting
Faculty: Accounting

Programs

- Bachelor of Science: Accounting

Course Descriptions

- Accounting (ACCT)

Accounting: Degree Maps

- Bachelor of Science: Accounting (Updated: 9/14/2018)

Anthropology

Co-Chair: Debra Gold
Address: 262 Stewart Hall
Phone: 320.308.2294
Email: anthropology@stcloudstate.edu
Website:www.stcloudstate.edu/anthropology
Faculty: Anthropology

Programs

- Bachelor of Arts: Anthropology
- Minor: Anthropology
- Master of Science: Cultural Resource Management Archaeology

Course Descriptions

- Anthropology (ANTH)

Anthropology: Degree Maps

- Bachelor of Arts: Anthropology (Updated: January 2018)

Applied Clinical Research

Director: Patricia Feulner
Address: 145 Robert H. Wick Science Building
Phone: 320-308-2167

Email: acr@stcloudstate.edu
Website: www.stcloudstate.edu/graduate/applied-clinical-research

Programs

- Master of Science: Applied Clinical Research

Course Descriptions

- Applied Clinical Research (ACR)

Art

Chairperson: Rosemary Williams
Address: 101 Kiehle Visual Arts Center
Phone: 320.308.4283
Email:art@stcloudstate.edu
Website:www.stcloudstate.edu/art
Faculty: Art

Programs

- Bachelor of Arts: Art
- Bachelor of Arts: Art History
- Bachelor of Science: Art Education K-12
- Bachelor of Fine Arts: Art
- Bachelor of Fine Arts: Graphic Design
- Bachelor of Fine Arts: Studio Art - 2D Media
- Bachelor of Fine Arts: Studio Art - 3D Media
- Bachelor of Fine Arts: Studio Art - Integrated
- Bachelor of Arts: Art (Minor)
- Minor: Graphic Design
- Minor: New Media - Music and Art

Course Descriptions

- Art (ART)

Art: Degree Maps

- Bachelor of Arts: Art (Updated: March 2014)
- Bachelor of Arts: Art History (Updated: March 2014)
- Bachelor of Arts: Double Major Art and Psychology (Updated: March 2014)
- Bachelor of Science: Art Education K-12 (Updated: March 2015)
- Bachelor of Fine Arts: 2D Media (Updated: March 2014)
- Bachelor of Fine Arts: 3D Media (Updated: March 2014)
- Bachelor of Fine Arts: Graphic Design (Updated: March 2014)
- Bachelor of Fine Arts: Integrated Media (Updated: March 2014)

Atmospheric & Hydrologic Sciences

Chairperson: Anthony Hansen
Address: 129 Robert H. Wick Science Building
Phone: 320.308.3260
Email:ahs@stcloudstate.edu
Website:www.stcloudstate.edu/ahs
Faculty: Atmospheric & Hydrologic Sciences

Programs

- Bachelor of Arts: Earth Science
- Bachelor of Science: Earth and Space Science Education (5-9 & 9-12)
- Bachelor of Science: Environmental Engineering
- Bachelor of Science: Hydrology
- Bachelor of Science: Meteorology
- Bachelor of Arts: Geology (minor)
- Bachelor of Arts: Hydrology (minor)
- Bachelor of Science: Geology (minor)
- Bachelor of Science: Hydrology (minor)
- Bachelor of Science: Meteorology (minor)

Course Descriptions

- Atmospheric & Hydrologic Sciences (AHS)
- Environmental Engineering (ENVE)

Atmospheric & Hydrologic Sciences: Degree Maps

- Bachelor of Arts: Earth Sciences
- Bachelor of Science: Earth and Space Science/General Science Education, Grades 5-12 (teaching) (Updated: November 2012)
- Bachelor of Science: Earth and Space Science/General Science Education, Grades 9-12 (teaching) (Updated: November 2012)
  Bachelor of Science: Environmental Engineering (Updated June 2018)
- Bachelor of Science: Hydrology (Updated: November 2012)
- Bachelor of Science: Meteorology with MATH 112 (Updated: April 2019)
- Bachelor of Science: Meteorology with MATH 115 (Updated: April 2019)
- Bachelor of Science: Meteorology with MATH 221 (Updated: April 2019)

Biology

Chairperson: Maureen Tubbiola
Address: 262 Robert H. Wick Science Building
Phone: 320.308.2039
Email:biology@stcloudstate.edu
Website:www.stcloudstate.edu/biology
Faculty: Biology

Programs

- Bachelor of Science: Biomedical Science
- Bachelor of Science: Biotechnology
- Bachelor of Science: Ecology and Field Biology - Ecology and Natural Resources
- Bachelor of Science: Ecology and Field Biology - Wildlife Biology
- Bachelor of Elective Studies: Biology
- Bachelor of Science: Biology (Minor)
- Master of Arts: Cell and Molecular Biology
- Master of Arts: Ecology and Natural Resources Biology
- Master of Science: Cell and Molecular Biology
- Master of Science: Ecology and Natural Resources Biology

Course Descriptions

- Biology (BIOL)
- Sciences (SCI)

Biology: Degree Maps

- Bachelor of Science: Biomedical Science (Update: November 2015)
- Bachelor of Science: Biochemistry and Molecular Biology: Biotechnology (Updated: November 2017)
- Bachelor of Science: Science Teaching, Life Science General Science 5-12 (Updated September 2016)
- Bachelor of Science: Science Teaching, Life Science 9-12 (Updated September 2016)
- Bachelor of Science: Biology: Biodiversity, Ecology and Evolution (Updated: September 2018)
- Bachelor of Elective Studies: Life Sciences (Updated: June 2018)

Chemistry and Biochemistry

Interim Chairperson: Michael Jeannot
Address: 358 Robert H. Wick Science Building
Phone: 320.308.3031
Email:chemistry@stcloudstate.edu
Website:www.stcloudstate.edu/chemistry/
Faculty: Chemistry & Biochemistry

Programs

- Bachelor of Science: Biochemistry
- Bachelor of Science: Chemistry (ACS Approved)
- Bachelor of Science: Chemistry (ACS Approved) - Biochemistry Concentration
- Bachelor of Science: Chemistry (ACS Approved) - Chemical Physics Concentration
- Bachelor of Science: Chemistry (ACS Approved) - Environmental Chemistry Concentration
- Bachelor of Science: Chemistry/Science Education Grades 5-12
- Bachelor of Science: Chemistry/Science Education Grades 9-12
- Master of Science in Material Science and Instrumentation
- Minor: Chemistry
- Minor: Forensic Science

Course Descriptions

- Chemistry (CHEM)

Chemistry and Biochemistry: Degree Maps

- Bachelor of Science: ACS Chemistry (Updated: 8/18)
- Bachelor of Science: ACS Biochemistry (Updated: 10/18)
- Bachelor of Science: ACS Chemical Physics (Updated: 10/18)
- Bachelor of Science: ACS Environmental Chemistry (Updated: 10/18)
- Bachelor of Science: Biochemistry (Updated: 10/16)
- Bachelor of Science: Biochemistry and Molecular Biology: Biochemistry (Updated: 10/18)
- Bachelor of Science: Chemistry Education Grades 9-12 (Updated: 11/18)
- Bachelor of Science: Chemistry/General Science Education Grades 5-12 (Updated: 10/18)

Child & Family Studies

Chairperson: JoAnn Johnson
Address: B109 Education Building
Phone: 320.308.2132
Email:cfs@stcloudstate.edu
Website:www.stcloudstate.edu/cfs
Faculty: Child & Family Studies

Programs

- Bachelor of Science: Early Childhood Education
- Bachelor of Elective Studies: Early Childhood Education (Minor)
- Minor: Early Childhood Education
- Master of Science: Child and Family Studies - Early Childhood Special Education
- Master of Science: Child and Family Studies - Family Studies
- Professional Specialization: Early Childhood Special Education
- Professional Specialization: Parent Education
- Graduate Tracks leading to Licensure: Parent Education

Course Descriptions

- Child & Family Studies (CFS)

Child & Family Studies: Degree Maps

- Bachelor of Science: Early Childhood Education Licensure (Updated: 5/17/17)

Communication Sciences & Disorders

Chairperson: Rebecca Nelson Crowell
Address: 103 Brown Hall
Phone: 320.308.2092
Email: csd@stcloudstate.edu
Website: www.stcloudstate.edu/csd
Faculty: Communication Sciences & Disorders

Programs

- Bachelor of Science: Communication Sciences and Disorders

- Bachelor of Elective Studies: Communication Sciences and Disorders
- Bachelor of Elective Studies: Communication Sciences and Disorders (Minor)
- Minor: Deaf Education
- Minor: Speech Language Pathology
- Master of Science: Communication Sciences and Disorders (CAA)

Course Descriptions

- Communication & Sciences Disorders (CSD)

Communication Sciences & Disorders: Degree Maps

- Bachelor of Science: Communication Disorders (Updated: 2/11/2019)
- M.S. in Communication Sciences and Disorders: Phase I or Post-Bacc (Updated 2/21/2017)
- M.S. in Communication Sciences and Disorders: Phase II (Updated 2/21/2017)

Communication Studies

Chairperson: R. Jeffrey Ringer
Address: 117 Riverview
Phone: 320.308.2216
Email: cmst@stcloudstate.edu
Website: www.stcloudstate.edu/cmst
Faculty: Communication Studies

Programs

- Bachelor of Arts: Communication Studies - Comprehensive
- Bachelor of Arts: Communication Studies - Intercultural Communication
- Bachelor of Arts: Communication Studies - Leadership and Organizational Communication
- Bachelor of Arts: Communication Studies - Relational Communication
- Bachelor of Arts: Communication Studies - Persuasion and Advocacy
- Bachelor of Arts: Communication Studies - Supplementary
- Bachelor of Science: Communication Studies - Interdepartmental
- Bachelor of Science: Communication Arts and Literature
- Bachelor of Arts: Applied Relational Conflict Management (Minor)
- Bachelor of Arts: Communication Studies (Minor)
- Bachelor of Arts: Intercultural Communication (Minor)

Course Descriptions

- Communication Studies (CMST)

Communication Studies: Degree Maps

- Bachelor of Arts: Communication Studies (Updated: 3/4/2013)
- Bachelor of Arts: Supplementary Major (Updated: 11/22/2011)
- Bachelor of Science: Communication Arts and Literature (teaching)
- Bachelor of Science: Communication Studies Interdepartmental (Updated: 11/22/2011)

Community Psychology, Counseling, & Family Therapy

Chairperson: William Lepkowski
Address: B210 Education Building
Phone: 320.308.2160
Email: ccp@stcloudstate.edu
Website: www.stcloudstate.edu/ccp
Faculty: Community Psychology, Counseling & Family Therapy

Programs

- Bachelor of Science: Chemical Dependency
- Bachelor of Science: Community Psychology
- Bachelor of Elective Studies: Community Psychology
- Minor: Community Psychology
- Master of Science: Applied Behavior Analysis (ABAI)
- Master of Science: College Counseling and Student Development
- Master of Science: Clinical Mental Health Couseling (CACREP)
- Master of Science: Counseling Psychology - Rehabilitation Counseling
- Master of Science: Counseling Psychology - School Counseling
- Master of Science: Marriage and Family Therapy (COAMFTE)
- Professional Specialization: Addictions Specialist
- Professional Specialization: Marriage and Family Therapy
- Professional Specialization: School Counseling

Course Descriptions

- Community Psychology (CPSY)
- Counselor Education & Education Psychology (CEEP)

Community Psychology, Counseling & Family Therapy: Degree Maps

- Bachelor of Science: Chemical Dependency Program and Certificate (Updated: October 2012)
- Bachelor of Science: Community Psychology (Updated: September 2017)

Computer Science & Information Technology

Chairperson: Ramnath Sarnath
Address: 139 Engineering & Computing Center
Phone: 320.308.4966
Email: csit@stcloudstate.edu
Website: www.stcloudstate.edu/csit
Faculty: Computer Science & Information Technology

Programs

- Bachelor of Science: Applied Computer Science
- Bachelor of Science: Computer Science (CSAB Accredited)
- Bachelor of Science: Computer Engineering (EAC Accredited)
- Bachelor of Science: Cybersecurity
- Bachelor of Science: Network Modeling and Simulation (Suspended)

- Bachelor of Arts: Computer Algorithmics (Minor)
- Bachelor of Arts: Computer Science (Minor)
- Bachelor of Arts: Computer Networking and Applications: Languages, Software Packages and Communications (Minor)
- Bachelor of Arts: Computer Networking and Applications: Languages, Software Packages and Operating Systems (Minor)
- Bachelor of Arts: Computer Organization and Programming (Minor)
- Bachelor of Arts: Data Communication (Minor)
- Bachelor of Arts: Information Technology Security (Minor)
- Bachelor of Science: Computer Algorithmics (Minor)
- Bachelor of Science: Computer Organization and Programming (Minor)
- Bachelor of Science: Computer Science (Minor)
- Bachelor of Science: Information Technology Security (Minor)
- Bachelor of Elective Studies: Computer Algorithmics (Minor)
- Bachelor of Elective Studies: Computer Networking and Applications (Minor)
- Bachelor of Elective Studies: Computer Organization and Programming (Minor)
- Bachelor of Elective Studies: Computer Science (Minor)
- Bachelor of Elective Studies: Data Communication (Minor)
- Bachelor of Elective Studies: Information Technology Security (Minor)
- Master of Science: Computer Science
- Professional Science Master in Software Engineering

Course Descriptions

- Computer Networking & Applications (CNA)
- Computer Science (CSCI)
- Information Assurance (IA)

Computer Science & Information Technology: Degree Maps

- Bachelor of Science: ABET Accredited Computer Science Major (starting with discrete math and CSCI 201) (August 2017)
- Bachelor of Science: ABET Accredited Computer Science Major (starting with pre-calculus and CSCI 200) (August 2017)
- Bachelor of Science: Information Technology Security (Updated: February 2012)
- Bachelor of Science: Software Engineering (Updated June 2017)
- Bachelor of Science: Cybersecurity (Updated September 5, 2017)

Digital Humanities

Director: Betsy Glade
Address: 283 Stewart Hall
Phone: 320-308-3165
Email: history@stcloudstate.edu

Program

Digital Humanities Graduate Certificate

Course Descriptions

Digital Humanities (DH)

Criminal Justice Studies

Chairperson: Mario L. Hesse
Address: 257 Stewart Hall
Phone: 320.308.4101
Email: criminaljustice@stcloudstate.edu
Website: www.stcloudstate.edu/criminaljustice
Faculty: Criminal Justice

Programs

- Bachelor of Arts: Criminal Justice Studies
- Minor: Criminal Justice Studies
- Master of Science: Criminal Justice Studies
- Master of Science: Criminal Justice Studies: Criminal Justice Administration
- Master of Science: Public Safety Executive Leadership

Course Descriptions

- Criminal Justice Studies (CJS)
- Public Safety Executive Leadership (PSEL)

Criminal Justice: Degree Maps

- Bachelor of Arts: Criminal Justice (Updated: 4/6/2018)

Economics

Chairperson: Nathan Hampton
Address: 386 Stewart Hall
Phone: 320.308.2227
Email: economics@stcloudstate.edu
Website: www.stcloudstate.edu/economics
Faculty: Economics

Programs

- Bachelor of Arts: Economics
- Bachelor of Arts: Business Economics
- Bachelor of Science: Mathematical Economics
- Minor: Economics
- Master of Science: Applied Economics
- The 5-Year BA/MS Track in Economics

Course Descriptions

- Economics (ECON)

- Public Non Profit (PNI)

Economics: Degree Maps

- Bachelor of Arts: Economics (Updated: 1/24/2018)
- Bachelor of Arts: Business Economics (Updated: 1/24/2018)
- Bachelor of Science: Mathematical Economics (Updated: 10/14/13)
- Bachelor of Science: Social Studies - Economics Emphasis (Updated: November 2012)
- Bachelor of Arts/Master of Science Applied Economics (Updated 7/27/16)
- Master of Science Applied Economics (Updated 7/27/16)

Educational Leadership & Higher Education

Chairperson: John Eller
Address: B109 Education Building
Phone: 320.308.1532
Website: www.stcloudstate.edu/elhe
Faculty: Educational Leadership & Higher Education

Programs

- Master of Science: Educational Administration and Leadership
- Master of Science: Higher Education Administration
- Doctor of Education: Educational Administration and Leadership
- Doctor of Education: Higher Education Administration
- Specialist Degree: Educational Administration and Leadership
- Professional Specialization: Community Education
- Graduate Track in Sixth Year Program: Educational Administration and Leadership leading to Licensure
  Graduate Certificate in Higher Education Administration

Course Descriptions

- Educational Administration (EDAD)
- Higher Education (HIED)

Electrical & Computer Engineering

Chairperson: Mahbub Hossain
Address: 211 Engineering & Computing Center
Phone: 320.308.3252
Website: www.stcloudstate.edu/ece
Faculty: Electrical & Computer Engineering

Programs

- Bachelor of Science: Computer Engineering
- Bachelor of Science: Electrical Engineering
- Master of Science: Electrical Engineering

Course Descriptions

- Electrical & Computer Engineering (ECE)

Electrical & Computer Engineering: Degree Maps

- Bachelor of Science: Computer Engineering (Updated 5/4/2017)
- Bachelor of Science: Electrical Engineering (Updated 5/4/2017)

English

Co-Chairpersons: Judy Dorn, Judith Kilborn
Address: 126 - 51 Building
Phone: 320.308.3061
Email: english@stcloudstate.edu
Website: www.stcloudstate.edu/english
Faculty: English

Programs

- Bachelor of Arts: Creative Writing
- Bachelor of Arts: English
- Bachelor of Arts: Linguistics
- Bachelor of Arts: Literature
- Bachelor of Arts: Rhetoric and Writing
- Bachelor of Science: Communication Arts and Literature
- Bachelor of Elective Studies: English
- Bachelor of Arts: Creative Writing (Minor)
- Bachelor of Arts: English (Minor)
- Bachelor of Arts: Linguistics (Minor)
- Bachelor of Arts: Rhetoric and Writing (Minor)
- Bachelor of Elective Studies: Creative Writing (Minor)
- Bachelor of Elective Studies: English (Minor)
- Bachelor of Science: Teaching English as a Second Language (Minor)
- Master of Arts: English Studies Concentration
- Master of Arts: Rhetoric and Writing Concentration
- Master of Arts: Teaching English as a Second Language
- Graduate Track in Teaching English as a Second Language leading to Licensure

Course Descriptions

- English (ENGL)
- English for Academic Purposes (EAP)

English: Degree Maps

- Bachelor of Arts: Creative Writing (Updated: September 2014)
- Bachelor of Arts: English (Updated: September 2014)
- Bachelor of Arts: Linguistics (Updated: September 2014)
- Bachelor of Arts: Literature (Updated: September 2014)
- Bachelor of Arts: Rhetorical and Applied Writing
- Bachelor of Science: Communication Arts and Literature (Updated October 2015)

Entrepreneurship

Director: Martin Breaker
Address: 326 Centennial Hall
Phone: 320.308.1606
Email: mbreaker@stcloudstate.edu
Website: http://www.stcloudstate.edu/programs/entrepreneurship/default.aspx
Faculty: Determined by student interest

Programs

- Bachelor of Science: Entrepreneurship
- Bachelor of Elective Studies: Entrepreneurship (Minor)
- Minor: Entrepreneurship

Course Descriptions

- Accounting (ACCT)
- Business Law (BLAW)
- Management (MGMT)
- Marketing (MKTG)

Entrepreneurship: Degree Maps

- Bachelor of Science: Entrepreneurship (Updated: 2/22/13)

Environmental & Technological Studies

Chairperson: Kevin Haglin
Address: 216 Headley Hall
Phone: 320.308.3235
Email: ets@stcloudstate.edu
Website: www.stcloudstate.edu/ets
Faculty: Environmental & Technological Studies

Programs

- Bachelor of Science: Environmental Science
- Bachelor of Science: Environmental Studies
- Bachelor of Science: Technology Education
- Bachelor of Science: Technology Management - Construction Management
- Bachelor of Science: Technology Management - Industrial Technology
- Bachelor of Elective Studies - Environmental Studies
- Bachelor of Elective Studies - Technology Studies
- Bachelor of Arts: Environmental Studies (Minor)
- Bachelor of Arts: Technology Studies (Minor)
- Bachelor of Science: Technology Studies (Minor)
- Bachelor of Elective Studies: Environmental Studies (Minor)
- Bachlor of Elective Studies: Technology Studies (Minor)

Course Descriptions

- Environmental & Technological Studies (ETS)

Environmental and Technological Studies: Degree Maps

- Bachelor of Science: Environmental Science (Updated: 3/15/17)
- Bachelor of Science: Environmental Studies (Updated: 3/15/17)
- Bachelor of Science: Technology Education (Updated: 11/16/12)
- Bachelor of Science: Manufacturing Engineering Technology (Updated: 4/17)
- Bachelor of Science: Technology Management
    - Construction Management Emphasis (Updated: 11/16/12)
    - Industrial Technology Emphasis (Updated: 11/16/12)

Ethnic, Gender and Women's Studies

Chairperson: Christopher Lehman
Address: B51 227
Phone: 320.308.4928
Website: www.stcloudstate.edu/ews
Faculty: Ethnic, Gender and Women's Studies

Programs

- Bachelor of Arts: Gender and Women's Studies
- Bachelor of Elective Studies: Gender and Women's Studies
- Bachelor of Arts: African American Studies (Minor)
- Bachelor of Arts: American Indian Studies (Minor)
- Bachelor of Arts: Asian Pacific American Studies (Minor)
- Bachelor of Arts: Chicano/a Studies (Minor)
- Bachelor of Arts: Ethnic Studies (Minor)
- Bachelor of Arts: Gender and Women's Studies (Minor)
- Bachelor of Science: African American Studies (Minor)
- Bachelor of Science: American Indian Studies (Minor)
- Bachelor of Science: Asian Pacific American Studies (Minor)
- Bachelor of Science: Chicano/a Studies (Minor)
- Bachelor of Science: Ethnic Studies (Minor)
- Bachelor of Science: Gender and Women's Studies (Minor)
- Bachelor of Elective Studies: African American Studies (Minor)
- Bachelor of Elective Studies: American Indian Studies (Minor)
- Bachelor of Elective Studies: Asian Pacific American Studies (Minor)
- Bachelor of Elective Studies: Chicano/a Studies (Minor)
- Bachelor of Elective Studies: Ethnic Studies (Minor)
- Bachelor of Elective Studies: Gender and Women's Studies (Minor)

Course Descriptions

- Ethnic Studies (ETHS)
- Gender and Women's Studies (GWS)

Ethnic, Gender and Women's Studies: Degree Maps

- Bachelor of Arts, Bachelor of Science and Bachelor of Elective Studies - Gender and Women's Studies (Updated: 2/18)

Finance, Insurance & Real Estate

Chairperson: Joseph Haley
Address: 463 Centennial Hall
Phone: 320.308.4986
Email: jhaley@stcloudstate.edu
Website: www.stcloudstate.edu/fire
Faculty: Finance, Insurance & Real Estate

Programs

- Bachelor of Science: Finance
- Bachelor of Science: Real Estate
- Bachelor of Science: Insurance
- Bachelor of Elective Studies: Finance (Minor)
- Bachelor of Elective Studies: Real Estate (Minor)
- Minor: Finance/Business Majors
- Minor: Finance/Non-Business Major
- Minor: Real Estate/Business Majors
- Minor: Real Estate/Non-Business Majors
- Certificate: Insurance

Course Descriptions

- Finance, Insurance & Real Estate (FIRE)

Finance, Insurance & Real Estate: Degree Maps

- Bachelor of Science: Finance (Updated: 9/14/2018)
- Bachelor of Science: Real Estate (Updated: 9/14/2018)

Geography & Planning

Chairperson: David Wall
Address: 359 Stewart Hall
Phone: 320.308.3160
Email: geog@stcloudstate.edu
Website: www.stcloudstate.edu/gp
Faculty: Geography & Planning

Programs

- Bachelor of Arts: Geography
- Bachelor of Arts: Planning and Community Development - Diversity Planning
- Bachelor of Arts: Planning and Community Development - Economic Development Planning
- Bachelor of Arts: Planning and Community Development - Environmental Planning

- Bachelor of Arts: Planning and Community Development - Planning & Geographic Information Science
- Bachelor of Arts: Planning and Community Development - Physical Planning
- Bachelor of Arts: Planning and Community Development - Public Planning
- Bachelor of Arts: Travel and Tourism
- Bachelor of Science: Land Surveying/Mapping Sciences
- Bachelor of Science: Social Studies (teaching)
- Bachelor of Elective Studies: Geography
- Bachelor of Elective Studies: Land Surveying and Mapping Sciences
- Bachelor of Elective Studies: Geography (Minor)
- Bachelor of Elective Studies: Land Surveying/Mapping Science (Minor)
- Minor: British Studies
- Minor: Geographic Information Science
- Minor: Geography
- Minor: Heritage Preservation
- Minor: Planning and Community Development
- Minor: Travel and Tourism
- Specialization: Land Surveying and Mapping Sciences
- Master of Science: Geography: Geographic Information Science Concentration
- Master of Science: Geography: Tourism Planning and Development
- Professional Specialization: Geographic Information Science

Course Descriptions

- Community Studie
- Geography (GEOG)
- Social Studies (SST)

Geography & Planning: Degree Maps

- Bachelor of Arts: Geography (Updated: 1/23/18)
- Bachelor of Arts: Geography with a GIS Minor (Updated: 1/23/18)
- Bachelor of Arts: Hospitality and Tourism (Updated: 10/2018)
- Bachelor of Arts: Planning and Community Development (Updated: 2/18)
- Bachelor of Arts: Travel and Tourism (Updated: 11/15/12)
- Bachelor of Science: Land Surveying and Mapping Sciences (Updated: 11/16/12)
- Bachelor of Science: Land Surveying and Mapping Sciences / GIS Minor (Updated: 11/15/12)
- Bachelor of Science: Social Studies Education - Geography Emphasis (Updated: 5/2018)

Gerontology

Chairperson: Rona Karasik
Graduate Coordinator: Phyllis Greenberg
Address: 312 Brown Hall
Phone: 320.308.5224
Email: gerontology@stcloudstate.edu
Website: www.stcloudstate.edu/gerontology
Faculty: Gerontology

Programs

- Master of Science: Gerontology
- Bachelor of Elective Studies: Gerontology (Minor)
- Minor: Gerontology
- Professional Specialization: Gerontology

Course Descriptions

- Gerontology (GERO)

Global Business

International Business

Contact: Diane Tourand
Address: 430 Centennial Hall
Phone: 320.308.3225
Email: management@stcloudstate.edu
Website: www.stcloudstate.edu/management/
Faculty: Paula Weber

Programs

- Bachelor of Science: Management - Global Business Concentration
- Minor: Global Business - Business Majors
- Minor: Global Business - Non-Business Majors

Course Descriptions

- Economics (ECON)
- Finance, Insurance and Real Estate (FIRE)
- Management (MGMT)
- Marketing (MKTG)

Global Business: Degree Maps

- Bachelor of Science: Management: Global Business (Updated: 5/4/2017)

Global Studies

Director: Mikhail Blinnikov
Address: A216 Education Building
Phone: 320.308.4908
Website: www.stcloudstate.edu/globalstudies
Faculty: Global Studies

Programs

- Bachelor of Arts: Global Studies
- Minor: Global Studies

Course Descriptions

- Global Studies (GLST)

History

Chairperson: Robert Galler
Address: 283 Stewart Hall
Phone: 320.308.3165
Email: history@stcloudstate.edu
Website: www.stcloudstate.edu/history
Faculty: History

Programs

- Bachelor of Arts: History
- Bachelor of Science: Social Studies: History Emphasis
- Bachelor of Arts: African Studies (Minor)
- Bachelor of Arts: East Asian Studies (Minor)
- Bachelor of Science: African Studies (Minor)
- Bachelor of Science: East Asian Studies (Minor)
- Bachelor of Elective Studies: African Studies (Minor)
- Minor: History
- Minor: History - Elementary Education
- Master of Arts: History
- Master of Arts: Public History
- Master of Science: History

Course Descriptions

- History (HIST)

History: Degree Maps

- Bachelor of Arts: History (Updated: August 2014)
- Bachelor of Science: Social Studies: History Emphasis (Updated: 4/6/18)

Human Relations & Multicultural Education

Chairperson: Semya Hakim
Address: B118 Education Building
Phone: 320.308.3124
Email: hurl@stcloudstate.edu
Website: www.stcloudstate.edu/hurl
Faculty: Human Relations & Multicultural Education

Programs

- Bachelor of Elective Studies: Human Relations (Minor
- Minor: Human Relations
- Master of Science: Social Responsibility

Course Descriptions

- Human Relations & Multicultural Education (HURL)

Information Media

Information Media

Information Media
Chairperson: Jennifer Jay
Address: A132 Education Building
Phone: 320.308.2062
Email: im@stcloudstate.edu
Website: www.stcloudstate.edu/im
Faculty: Information Media

Programs

- Master of Science: Information Media - Technology Integration
- Master of Science: Information Media - Library Media
- Master of Science: Information Media - Instructional Design and Training
- Specialization: Instructional Technology
- Professional Specialization: Design for E-Learning
- Professional Specialization: Instructional Technology
- Professional Specialization: Library Media Specialist
- Professional Specialization: Technology Integration
- Graduate Track leading to Licensure: Library Media Specialist

Course Descriptions

- Information Media (IM)

Information Assurance and Information Systems

Chairperson: Susantha Herath
Address: 443 Centennial Hall
Phone: 320.308.2174
Email: is@stcloudstate.edu
Website: www.stcloudstate.edu/is
Faculty: Information Systems

Programs

- Bachelor of Science: Information Systems
- Minor: Information Systems

- Minor: Information Systems - Non-Business Majors
- Bachelor of Elective Studies: Information Systems (Minor)
- Master of Science: Information Assurance
- Specialization: Business Intelligence
- Specialization: Information Assurance

Course Descriptions

- Information Assurance (IA)
- Information Systems (IS)

Information Systems: Degree Maps

- Bachelor of Science: Information Systems (Updated: 9/14/2018)
- Bachelor of Science/Master of Science: Information Systems/Information Assurance (Updated 9/11/14)

Kinesiology

Chairperson: Laura Finch
Address: 327 Halenbeck Hall
Phone: 320.308.4251
Email: kinesiology@stcloudstate.edu
Website: www.stcloudstate.edu/kinesiology
Faculty: Kinesiology

Programs

- Bachelor of Science: Athletic Training (CAATE)
- Bachelor of Science: Community Health
- Bachelor of Science: Health/Physical Education (Teaching) (NCATE, BOT)
- Bachelor of Science: Physical Education (Teaching)
- Bachelor of Science: Recreation and Sports Management
- Bachelor of Elective Studies: Physical Education (Non Teaching)
- Bachelor of Science: Athletic Coaching (Minor)
- Bachelor of Science: Community Health (Minor)
- Master of Science: Exercise Science
- Master of Science: Sports Management

Course Descriptions

- Health (HLTH)
- Health & Physical Education (HPE)
- Physical Education and Sport Science (PESS)
- Recreation (REC)

Kinesiology: Degree Maps

- Bachelor of Science: Athletic Training (Updated: January 2015)
- Bachelor of Science: Community Health (Updated: August 2018)

- Bachelor of Science: Health/Physical Education (Updated: October 2017)
- Bachelor of Science: Physical Education (teaching) (Updated: July 2009)
- Bachelor of Science: Recreation and Sports Management (Updated: May 2015)

Languages & Cultures

Chairperson: Lisa Loftis
Address: 113 Lawrence Hall
Phone: 320.308.4141
Email: forl@stcloudstate.edu
Website: www.stcloudstate.edu/forl
Faculty: Languages and Cultures

Programs

- Bachelor of Arts: French
- Bachelor of Arts: German
- Bachelor of Arts: Spanish
- Bachelor of Science: French (Education)
- Bachelor of Science: German (Education)
- Bachelor of Science: Spanish (Education)
- Bachelor of Elective Studies: French
- Bachelor of Elective Studies: German
- Bachelor of Elective Studies: Spanish
- Bachelor of Elective Studies: French (Minor)
- Bachelor of Elective Studies: German (Minor)
- Bachelor of Elective Studies: Spanish (Minor)
- Minor: French
- Minor: German
- Minor: Spanish

Course Descriptions

- Foreign Languages (FORL)
- French (FREN)
- German (GER)
- Japanese (JPN)
- Russian (RUSS)
- Soviet Studies (SOV)
- Spanish (SPAN)

Languages & Cultures: Degree Maps

- Bachelor of Arts: French (Updated: 12/8/2015)
- Bachelor of Arts: German (Updated: 12/8/2015)
- Bachelor of Arts: Spanish (Updated: 12/8/2015)
- Bachelor of Arts Minor: French (Updated: 12/8/2015)
- Bachelor of Arts Minor: German (Updated: 12/8/2015)
- Bachelor of Arts Minor: Spanish (Updated: 12/8/2015)
- Bachelor of Science: French (K-12) (Updated: 12/8/2015)

- Bachelor of Science: German (K-12) (Updated: 12/8/2015)
- Bachelor of Science: Spanish (K-12) (Updated: 12/8/2015)

Management and Entrepreneurship

Chairperson: Mike Pesch
Address: 439 Centennial Hall
Phone: 320.308.3225
Email: management@stcloudstate.edu
Website: www.stcloudstate.edu/management
Faculty: Management

Programs

- Bachelor of Science: Management
- Bachelor of Science: Management - Global Business Concentration
- Bachelor of Science: Management - Human Resources Concentration
- Bachelor of Science: Management - Operations Management Concentration
- Minor: Management - Business Majors
- Minor: Management - Non-Business Majors and BES
- Bachelor of Science: Entrepreneurship
- Minor: Entrepreneurship - Non-Business Majors and BES
- Minor: Global Business - Business Majors
- Minor: Global Business - Non-Business Majors

Course Descriptions

- Management (MGMT)

Management: Degree Maps

- Bachelor of Science: Management (Updated: 9/14/2018)
- Bachelor of Science: Management: Human Resources (Updated: 9/14/2018)
- Bachelor of Science: Management: Operations Management (Updated: 9/14/2018)
- Bachelor of Science: Entrepreneurship (Updated: 9/14/2018)
- Bachelor of Science: Management: Global Business (Updated 9/14/2018)

Marketing

Chairperson: Dennis Bristow
Address: 462 Centennial Hall
Phone: 320.308.2057
Email: mkbl@stcloudstate.edu
Website: www.stcloudstate.edu/mkbl
Faculty: Marketing

Programs

- Bachelor of Science: Marketing
- Bachelor of Elective Studies: Marketing (Minor)
- Minor: Marketing - Business Majors

- Minor: Marketing - Non-Business Majors
- Specialization: Professional Selling

Course Descriptions

- Business Law (BLAW)
- Marketing (MKTG)

Marketing: Degree Maps

- Bachelor of Science: Marketing (Updated: 9/14/2018)
- Bachelor of Science: General Business (Updated: 9/14/2018)

Mass Communications

Chairperson: Dale Zacher
Address: 125 Stewart Hall
Phone: 320.308.3293
Email: masscommunications@stcloudstate.edu
Website: www.stcloudstate.edu/masscommunications
Faculty: Mass Communications

Programs

- Bachelor of Science: Mass Communications: Creative Media Production
- Bachelor of Science: Mass Communications: Journalism
- Bachelor of Science: Mass Communications: Strategic Communications
- Minor: Mass Communications
- Master of Science: Mass Communications - Strategic Media Communications

Course Descriptions

- Mass Communications (MCOM)

Master of Business Administration

MBA Program Director: Brandon Johnson
Address: 118 Centennial Hall
Phone: 320.308.3213
Email: mba@stcloudstate.edu**Website:** www.stcloudstate.edu/graduate/mba/default.aspx

Programs

- Master of Business Administration: Plymouth Program
- Master of Business Administration: St. Cloud Program

Mathematics & Statistics

Chairperson: Keith Agre
Address: 139 Engineering & Computing Center
Phone: 320.308.3001
Email: mathstat@stcloudstate.edu
Website: www.stcloudstate.edu/mathstat
Faculty: Mathematics & Statistics

Programs

- Bachelor of Arts: Mathematics
- Bachelor of Science: Mathematics (Education BS)
- Bachelor of Science: Statistics - Actuarial Science
- Bachelor of Science: Statistics - Applied Statistics
- Bachelor of Science: Statistics - Mathematical Statistics
- Bachelor of Arts: Mathematics (Minor)
- Bachelor of Science: Mathematics (Minor)
- Minor: Middle School Mathematics
- Minor: Statistics

Course Descriptions

- Mathematics (MATH)
- Statistics (STAT)

Mathematics & Statistics: Degree Maps

- Bachelor of Arts: Mathematics (Updated: 11/11/2015)
- Bachelor of Science: Mathematics (teaching) (Updated: 10/6/2017)
- Bachelor of Science: Statistics: Mathematical Statistics (Updated: 12/29/2016)
- Bachelor of Science: Data Analytics Concentration (Updated: 12/29/2016)
- Bachelor of Science: Data Science Concentration (Updated: 12/29/2016)

Mechanical & Manufacturing Engineering

Chairperson: Kenneth Miller
Address: 101 Engineering & Computing Center
Phone: 320.308.5654
Email: mme@stcloudstate.edu
Website: www.stcloudstate.edu/mme
Faculty: Mechanical & Manufacturing Engineering

Programs

- Bachelor of Science: Manufacturing Engineering
- Bachelor of Science: Mechanical Engineering
- Master of Engineering Management (MEM)

Course Descriptions

- Engineering Management (EM)

- Mechanical and Manufacturing Engineering (MME)

Mechanical & Manufacturing Engineering: Degree Maps

- Bachelor of Science: Manufacturing Engineering (Updated; 10/30/2018)
- Bachelor of Science: Mechanical Engineering (Updated: 10/30/2018)
- Bachelor of Science: Dual Major Program in ME and MfgE (Updated: 10/30/2018)

Medical Device Regulation

Director: Cathy Krier
Address: St. Cloud State at Plymouth, 9750 Rockford Road, Plymouth, MN 55442
Phone: 320-308-2167
Email: ras@stcloudstate.edu
Website: www.stcloudstate.edu/graduate/med-device-regulation/default.aspx

Program

- Certificate in Medical Device Regulation

Medical Laboratory Science

Chairperson: Louise Millis
Address: 145 Robert H. Wick Science Building
Phone: 320.308.2192
Website: www.stcloudstate.edu/healthsciences
Faculty: Medical Laboratory Science

Programs

- Bachelor of Science: Medical Laboratory Science

Course Descriptions

- Medical Laboratory Science (MLS)

Medical Laboratory Science Degree Maps

- Bachelor of Science: Medical Laboratory Science - MLT to MLS/2+2 Program (Updated: 5/3/18)

Medical Technology Quality

Director: James Marcotte
Address: 145 Robert H. Wick Science Building
Phone: 320.308.2167
Email: mtq@stcloudstate.edu
Website: www.stcloudstate.edu/graduate/med-tech-quality

Programs

- Master of Science: Medical Technology Quality

Course Descriptions

- Medical Technology Quality (MTQ)

Military Science

Director: LTC Darrell Bascom
Address: 11 Stewart Hall
Phone: 320.308.3930
Website:armyrotc.com/edu/mnstjohns

Programs

- Bachelor of Arts: Military Science (Minor)
- Bachelor of Science: Military Science (Minor)
- Bachelor of Elective Studies: Military Science (Minor)

Course Descriptions

- Military Science (MILS)

Music

Chairperson: Kristian Twombly
Address: 238 Performing Arts
Phone: 320.308.3223
Email: music@stcloudstate.edu
Website: www.stcloudstate.edu/music
Faculty: Music

Programs

- Bachelor of Arts: Music [NASM]
- Bachelor of Arts: Music - Jazz Concentration (Suspended and not admitting new students)
- Bachelor of Arts: Music - Composition Concentration [NASM]
- Bachelor of Arts: Music - Composition and New Media Concentration [NASM]
- Bachelor of Science: Music - Vocal[NASM, NCATE, BOT]
- Bachelor of Science: Music - Instrumental [NASM, NCATE, BOT]
- Bachelor of Music: Music - Instrumental Performance [NASM]
- Bachelor of Music: Music - Piano Pedagogy (Suspended and not admitting new students)
- Bachelor of Music: Music - Piano Performance [NASM]
- Bachelor of Music: Music - Vocal Performance [NASM]
- Bachelor of Elective Studies: Music [NASM]
- Minor: Music [NASM]
- Minor: New Media - Music and Art [NASM, NASAD]

Course Descriptions

- Music Education (MUSE)
- Music Musicianship (MUSM)
- Music Performance (MUSP)

Music: Degree Maps

- Bachelor of Arts: Composition and New Media Concentration (Updated 9/25/15)
- Bachelor of Arts: Composition Concentration (Updated 9/25/15)
- Bachelor of Arts: Music (Updated 9/25/15)
- Bachelor of Music: Instrumental Performance (Updated 9/28/15)
- Bachelor of Music: Piano Performance (Updated 9/28/15)
- Bachelor of Music: Vocal Performance (Updated 9/28/15)
- Bachelor of Science: Vocal and General Music Concentration (Updated 9/25/15)
- Bachelor of Science: Instrumental and General Music Concentration (Updated 9/25/15)
- Music Minor(Updated 9/28/15)
- Music Minor: New Media - Music and Art(Updated 9/28/15)

Nuclear Medicine Technology

Director: Steven Ratliff
Address: 145 Robert H. Wick Science Building
Phone: 320-308-2192
Email: medicalphysics@stcloudstate.edu
Website: www.stcloudstate.edu/healthsciences
Faculty: Nuclear Medicine Technology

Programs

- Bachelor of Science: Nuclear Medicine Technology

Course Descriptions

- Nuclear Medicine Technology (NMDT)

Nuclear Medicine Technology: Degree Map

- Bachelor of Science: Nuclear Medicine Technology (Updated 10/5/16)

Nursing Science

Chairperson: Jane Bagley
Address: 213 Brown Hall
Phone: 320.308.1749
Email: nursing@stcloudstate.edu
Website: www.stcloudstate.edu/nursing
Faculty: Nursing Science

Programs

- Bachelor of Science: Nursing (CCNE)
- RN to BSN (online)

Course Descriptions

- Nursing Science (NURS)

Nursing Science: Degree Maps

- Bachelor of Science: Nursing (Updated: 4/5/18)
- Bachelor of Science: Nursing RN to BS Completion (Updated 8/30/18)

Philosophy

Interim Chairperson: Jordan Curnutt
Address: 365 Centennial Hall
Phone: 320.308.2234
Email: philosophy@stcloudstate.edu
Website: www.stcloudstate.edu/philosophy
Faculty: Philosophy

Programs

- Bachelor of Arts: Philosophy
- Bachelor of Arts: Philosophy - Interdisciplinary
- Minor: Philosophy
- Minor: Philosophy - Interdisciplinary
- Minor: Philosophy (Mathematics Majors)

Course Descriptions

- Philosophy (PHIL)

Philosophy: Degree Maps

- Bachelor of Arts: Philosophy (Updated: July 2014)

Physics and Astronomy

Chairperson: Chris Kvaal
Address: 324 Robert H. Wick Science Building
Phone: 320/308.2011
Email: physics@stcloudstate.edu
Website: www.stcloudstate.edu/physics/
Faculty: Physics and Astronomy

Programs

- Bachelor of Science: Astrophysics
- Bachelor of Science: Electro Optics
- Bachelor of Science: Engineering Science
- Bachelor of Science: Mathematical Physics
- Bachelor of Science: Physics Education 9-12
- Bachelor of Science: Physics - General Science Education 5-12
- Bachelor of Science: Professional Physics
- Bachelor of Science: Self Selection
- Bachelor of Elective Studies: Physics
- Minor: Optics
- Minor: Physics
- Master of Science Material Science and Instrumentation

Course Descriptions

- Astronomy (ASTR)
- Engineering (ENGR)
- Physics (PHYS)

Physics and Astronomy: Degree Maps

- Bachelor of Science: ACS Chemical Physics(Updated May 2012)
- Bachelor of Science: Astrophysics Track (Updated: 4/17/2012)
- Bachelor of Science: Electro-optics Physics Track (Updated 4/17/2012)
- Bachelor of Science: Engineering Science Track (Updated 4/17/2012)
- Bachelor of Science: Mathematics Physis Track (Updated 4/17/2012)
- Bachelor of Science: Physics
- Bachelor of Science: Physics Emphasis, Grades 5-12 (Updated 5/6/2019)
- Bachelor of Science: Physics Emphasis, Grades 9-12 (Updated 5/6/2019)
- Bachelor of Science: Professional Physics Track (Updated 4/17/2012)
- Bachelor of Science: Self Selection Track(Updated: 4/17/2012)
- Bachelor of Elective Studies: Physics

Political Science

Chairperson: Jason Lindsey
Address: 328 - 51 Building
Phone: 320.308.2162
Website: www.stcloudstate.edu/politicalscience
Faculty: Political Science

Programs

- Bachelor of Arts: International Relations
- Bachelor of Arts: Latin American Studies
- Bachelor of Arts: Political Science
- Bachelor of Science: Social Studies- Political Science Emphasis
- Minor: International Relations
- Minor: Latin American Studies
- Minor: Political Science

- Specialization: Health Administration
- Master of Public Administration

Course Descriptions

- Political Science (POL)

Political Science: Degree Maps

- Bachelor of Arts: International Relations (Updated: April 2012)
- Bachelor of Arts: Political Science (Updated; April 2012)
- Bachelor of Science: Social Studies: Political Science Emphasis (teaching) (Updated: November 2012)

Psychology

Psychology: Leslie Valdes
Address: 101 Whitney House
Phone: 320.308.4157
Email: psychology@stcloudstate.edu
Website: www.stcloudstate.edu/psychology
Faculty: Psychology

Programs

- Bachelor of Arts: Psychology
- Bachelor of Elective Studies: Psychology (Minor)
- Minor: Psychology
- Master of Science: Industrial/Organizational Psychology

Course Descriptions

- Psychology (PSY)

Psychology: Degree Maps

- Bachelor of Arts: Psychology - Students who entered SCSU with 15 or fewer credits (Updated: 9/22/14)
- Bachelor of Arts: Psychology - Transfer Students with 16 or more credits (Updated: 2/12/16)
- Bachelor of Arts: Double Major Art and Psychology (Updated 9/22/14)

Radiologic Technology

Director: Steven Ratliff
Address: 145 Robert H.Wick Science Building
Phone: 320.308.2192
Email: medicalphysics@stcloudstate.edu
Website: www.stcloudstate.edu/healthsciences
Faculty: Radiologic Technology

Programs

- Bachelor of Science: Radiologic Technology

Course Descriptions

- Radiologic Technology (RADT)

Radiologic Technology: Degree Map

- Bachelor of Science: Radiologic Technology (Updated: 8/9/18)

Regulatory Affairs and Services

Director: Cathy Krier
Address: 145 Robert H. Wick Science Building
Phone: 320.308.4262
Email:ras@stcloudstate.edu
Website:www.stcloudstate.edu/graduate/regulatory-affairs

Programs

- Master of Science: Regulatory Affairs and Services

Course Descriptions

- Regulatory Affairs and Services (RAS)

Religious Studies

Director: Kevin Sharpe
Address: Centennial Hall 365O
Phone: 320.308.5316
Website: www.stcloudstate.edu/religiousstudies
Faculty: Religious Studies

Programs

- Bachelor of Arts: Religious Studies (minor)
- Bachelor of Elective Studies: Religious Studies (minor)

Course Descriptions

- Jewish Studies (JWST)
- Religious Studies (REL)

Science Education

Phone: 320.308.2039
Email: cose@stcloudstate.edu
Website: www.stcloudstate.edu/scienceeducation

Course Descriptions

- Sciences (SCI)

Social Studies

Director: Kyle Ward
Address: Stewart Hall 361
Phone: 320.308.5226
Website: http://www.stcloudstate.edu/socialstudiesed/

Programs

- Social Studies: Economics - Education (BS)
- Social Studies: Elementary Education (Minor)
- Social Studies: Geography - Education (BS)
- Social Studies: History (BS)
- Social Studies: Political Science (BS)
- Social Studies: Social Science(BS)
- Social Studies: Sociology (BS)

Course Descriptions

- Social Studies (SST)

Social Work

Chairperson: Patience Togo Malm
Address: 226 Stewart Hall
Phone: 320.308.3139
Email: socialwork@stcloudstate.edu
Website: www.stcloudstate.edu/socialwork
Faculty: Social Work

Programs

- Bachelor of Science: Social Work (CSWE)
- Master of Social Work (MSW) (CSWE)

Course Descriptions

- Social Work (SW)

Social Work: Degree Maps

- Bachelor of Science: Social Work (Updated 3/4/19)

Sociology

Chair: Stephen Philion
Address: 256 Stewart Hall
Phone: 320.308.5497
Email: sociology@stcloudstate.edu
Website: www.stcloudstate.edu/sociology
Faculty: Sociology

Programs

- Bachelor of Arts: Sociology
- Bachelor of Arts: Sociology - Concentration in Critical Applied Sociology
- Bachelor of Arts: Sociology - Interdepartmental
- Bachelor of Science: Social Studies: Sociology Emphasis (Education)
- Minor: Sociology

Course Descriptions

- Sociology (SOC)

Sociology Degree Maps

- Bachelor of Arts: Sociology - Concentration in Critical Applied Sociology (Updated 6/26/18)
- Bachelor of Arts: Sociology (Updated 6/26/18)
- Bachelor of Science: Social Studies: Sociology Emphasis (teaching) (Updated: November 2012)

Special Education

Chairperson: Bradley Kaffar
Address: A211 Education Building
Phone: 320.308.2041
Email: sped@stcloudstate.edu
Website: www.stcloudstate.edu/sped
Faculty: Special Education

Programs

- Bachelor of Science: Special Education: Academic and Behavioral Strategist
- Minor: Special Education
- Master of Science: Special Education
- Professional Specialization: ASD Teacher Preparation Program
- Professional Specialization: Autism
- Professional Specialization: Developmental Disabilities
- Professional Specialization: Emotional/Behavioral Disorders
- Professional Specialization: Learning Disabilities
- Professional Specialization: SPED: Academic and Behavioral Strategist

Course Descriptions

- Special Education (SPED)

Special Education: Degree Maps

- Bachelor of Science: Special Education (Updated 9/21/2016)

Special Studies

Contact: Melanie Guentzel, Director of Graduate Student Services
Address: 121 Administrative Services
Phone: 320.308.4720
Email: mjguentzel@stcloudstate.edu**Website:**http://www.stcloudstate.edu/gradadmissions/
Faculty: Determined by student interest

Programs

- Master of Science: Special Studies
- Master of Arts: Special Studies

Teacher Development

Chairperson: Jennifer Jay
Address: A132 Education Building
Phone: 320.308.3007
Email: ed@stcloudstate.edu
Website: www.stcloudstate.edu/ed
Faculty: Teacher Development

Programs

- Bachelor of Science: Elementary/K-6 Education
- Minor - Social Studies - Elementary Education Emphasis
- Master of Science: Curriculum and Instruction
- Professional Specialization - Reading Teacher K-12
- Professional Specialization - Teacher Leader

Course Descriptions

- Teacher Development (ED)

Teacher Development: Degree Maps

- Bachelor of Science: Elementary/K-6 Licensure (Updated: 4/30/18)
- Bachelor of Science: Secondary Education Licensure (Updated 10/26/18)

Theatre & Film Studies

Chairperson: Christopher Jordan
Address: 202 Performing Arts
Phone: 320.308.3229
Email: theatrefilmdance@stcloudstate.edu

Website: www.stcloudstate.edu/theatrefilmdance
Faculty: Theatre & Film Studies

Programs

- Bachelor of Arts: Film Studies
- Minor: Film Studies
- Minor: Theatre

Course Descriptions

- Dance (DANC)
- Film Studies (FS)
- Theatre (TH)

Theatre & Film Studies

- Bachelor of Arts: Film Studies (Updated: April 22, 2013)
- Bachelor of Arts: Theatre (Updated: March 5, 2019)

Traffic Safety

Contact: Mark Lee
Address: 115M Brown Hall
Phone: 320.308.3081
Email:mdlee@stcloudstate.edu
Website:www.stcloudstate.edu/continuingstudies/driversed
Faculty: Mark Lee

Programs

- Professional Specialization: Traffic Safety Education
- Graduate Tracks leading to Licensure: Driver Education

Courses

- Traffic Safety Education (TSE)

Faculty & Administration

Administrative Officers

Please refer to the Organizational Chart available from the Office of the President.

A

Abartis, Caesarea (1977)

Professor, Department of English
A.B. 1967, Duquesne University; M.A. 1969, Ph.D. 1977, Southern Illinois University at Carbondale

Ackerlund, Julie (2014)

Assistant Professor, Department of Community Psychology, Counseling and Family Therapy
B.S. 2007, University of Wisconsin-Eau Claire, M.S. 2009, Southern Illinois University-Carbondale

Adam, Bahattin (2017)

Assistant Professor, Department of Chemistry and Biochemistry
M.D. 1988, Uludag University; Ph.D. 1991, Ataturk University; M.S.C. 2007 Selcuk University

Agre, Keith (2001)

Professor, Department of Mathematics and Statistics; Chairperson, Department of Mathematics and Statistics
B.A. 1995, Concordia College at Moorhead; M.S. 1997, Ph.D. 2000, University of Nebraska at Lincoln

Ahlgren, Kevin M. (2012)

Assistant Professor, Department of Geography and Planning
B.C.E. Civil Engineering, 2005, University of Minnesota; M.S. Geodetic Science, 2011, Ohio State University

Ahmad, Shahzad (1990)

Interim Associate Vice President for International Studies; Director, Multicultural Student Services
B.A. 1989, M.S. 1997, St. Cloud State University

Ahmad, Sohel (1997)

Professor, Department of Management and Entrepreneurship
B.S.M.E. 1987, Bangladesh Institute of Technology; M.S.I.E. 1992, The University of Alabama; Ph.D. 1998, University of Minnesota-Twin Cities

Ahn, Jungwon (2017)

Assistant Professor, Department of Mechanical and Manufacturing Engineering
B.S. 2008, Yonsei University; M.S. 2014, Ph.D. 2017, University of Minnesota Twin Cities

Akhavan, Roya (2001)

Professor, Department of Mass Communications
B.A. 1977, M.A. 1984, Ph.D. 1988, University of Minnesota-Twin Cities

Akubue, Anthony I. (1990)

Professor, Department of Environmental and Technological Studies
B.B.A. 1980, M.B.A. 1982, Marshall University; Ed.D. 1989, West Virginia University

Al-Azzam, Omar (2015)

Associate Professor, Department of Computer Science and Information Technology
B.S. 2003, M.S. 2005, Yarmouk University; Ph.D. 2012, North Dakota State University

Alexander, Julie A. (1997)

Head Athletic Trainer, Women's Athletics
B.A. 1980, Saint Olaf College; M.S. 1985, Indiana University at Bloomington

Alvarez, Guido (2017)

Assistant Professor, Department of Art
M.F.A. 2002, Virginia Commonwealth University

Amiri, Rami (2014)

Assistant Professor, Department of Electrical and Computer Engineering
B.S.C. 2002, Al-Balqa' Applied University; M.S. 2006, Middle Tennessee State University; M.S. 2008, Ph.D. 2014, Tennessee Technological University

Anda, Andrew A. (2001)

Professor, Department of Computer Science and Information Technology
B.A. 1982, Northeastern Illinois University; Ph.D. 1995, University of Minnesota-Twin Cities

Andel, Jill M. (2008)

Assistant Director of Admissions/Transfer Coordinator
B.S. 2001, St. Cloud State University

Anderson, Steven L. (1989)

Professor, Department of Academic Support
B.S. 1986, M.B.A. 1991, St. Cloud State University; Ph.D. 2001, University of Minnesota-Twin Cities

Anderson, Traci L. (2007)
Assistant Professor, Department of Communication Studies
B.S. 1994, Eastern Michigan University; M.A. 1997, Ph.D.2000, University of Cincinnati

Anderson, Jeanne (1991)
Professor of Learning Resources
B.F.A, 1976; M.F.A. 1982, M.A., Ed.D. 1990, Northern Illinois University;

Andzenge, Dick T. (1992)
Department of Criminal Justice
B.A. 1979, Calvin College; M.D.A. 1984, M.A. 1985, Ph.D. 1991, Western Michigan University

Anhalt-Warner, Tamera A. (2008)
Assistant Director of Training, Continuing Studies
B.A. 1983, St. Cloud State University

Antunez, Hector Giovanni (2005)
Professor, Department of Kinesiology
M.S., 1997, Tulane University; Ph.D., 2004, Tulane University

Arriagada, Jorge E. (1999)
Professor, Department of Biology
B.S. 1979, M.S. 1983, University of Concepcion (Chile); Ph.D. 1994, Ohio State University

Atteberry, Jennifer (2017)
Assistant Professor, Department of Nursing Science
A.A. 1999, Kirkwood Community College; B.A. 1996, University of Iowa; M.A. 2008, University of Phoenix-Phoenix Campus

B

Bagley, Jane (2006)
Assistant Professor, Department of Nursing Science; Chairperson, Department of Nursing Science
B.S. 1993, College of St. Benedict; M.S. 2009, University of Minnesota Twin Cities

Baker, John (2017)
Assistant Professor, Department of Criminal Justice
B.A. 1999, St. Cloud State University; J.D. 2003, Hamline University

Baker, Timothy D. (2008)
Associate Professor, Department of Counseling and Community Psychology
B.A. 1999, University of Mobile; M.Ed. 2004, Ph.D. 2008, University of Florida

Baker, Randal G. (1993)
Professor, Department of Geography and Planning; Director, Travel and Tourism
B.S. 1987, Brigham Young University; M.A. 1989, George Washington University; Ph.D. 1993, Oregon State University

Bakker, Stacy (2014)
Assistant Professor, Department of Nursing Science
B.A. 2001, University of Jamestown; M.A. 2014, Bethel University

Baldwin, Trista J. (2007)
Associate Professor, Department of English
B.A. 1993, Evergreen State College; M.F.A. 1999, Arizona State University

Baliga, Ben R. (2001)
Professor, Department of Mechanical and Manufacturing Engineering
B.E. 1981, University of Mysore (India); M.M.S. 1991, University of Poona (India); M.E. (C.I.M.) 1994, Ph.D. 2000, Swinburne University (Australia)

Banaian, King (1984)
Dean, School of Public Affairs; Professor, Department of Economics
A.B. 1979, Saint Anselm College; M.A. 1984, Ph.D. 1986, Claremont Graduate School

Bang, Chulhwan (2015)
Instructor, Department of Information Systems
B.S., 2001, Dongguk University; M.S., 2015, State University of New York (SUNY)

Bartha, Ivan L. (2005)
Coordinator, Experiential Programs Sports Facilities and Campus Recreation
B.S. 1995, Northern Michigan University; M.Ed. 2003, Southern Illinois University

Barton, Matthew D. (2005)
Professor, Department of English
B.A. 1999, M.A. 2001, Northwestern State University; Ph.D. 2005, University of South Florida

Baugnet, Julie A. (1998)
Professor, Department of Art
B.F.A. 1979, M.F.A. 1995, Minneapolis College of Art and Design

Bayerl, Susan J. (1995)
Registrar
B.A. 1980, College of St. Benedict; M.S. 1997, St. Cloud State University

Becker, Susan (1984)
Associate Athletic Director/Senior Woman Administrator
B.A. 1982, University of Wisconsin-Eau Claire; M.S. 1984, Emporia State University; Ph.D. 1995, Oregon State University

Beckermann, Corita A. (1990)
Director, Student Health Services
B.A. 1998, M.S. 2002, St. Cloud State University

Beddow-Beste, Jolaine (2014)
Assistant Professor, Department of Special Education
B.S. 1996, Minnesota State University Moorhead; M.Ed. 2001, University of Minnesota-Duluth

Belay, Hanna (2016)
Assistant Professor, Department of Nursing Science
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Course Numbering System

Courses numbered 001 to 099 may not be used to meet graduation requirements.

The chart indicates the general numeric range for the respective class standings:

FRESHMAN	100 to 199
SOPHOMORE	200 to 299
JUNIOR	300 to 399
SENIOR	400 to 499
Graduate (paired with Undergraduate*)	500 to 599
Graduate	600 to 699
Courses numbered 600 to 699 are exclusively for graduate students.	
Courses numbered 700 to 795 are exclusively for graduate students	700 to 795
Doctoral	800 to 899

*Courses numbered 500 to 599 are double-numbered courses (with courses in the 400 to 499 series) and are open to graduate students.

Degree Designations

Baccalaureate degrees (B.A., B.S., B.F.A., B.Mus., B.E.S.)

Baccalaureate degrees are considered to be the standard college degree. St. Cloud State University requires the completion of a minimum of 120 credits, excluding credits in courses numbered below 100. Credits must be earned in general education (liberal arts and sciences portion of a degree), in a major and/or minor, and with remaining credits in university electives. St. Cloud offers baccalaureate degrees in Arts (B.A.), Sciences (B.S.), Fine Arts (B.F.A.), Music (B.Mus.), and Elective Studies (B.E.S.)

Although a student normally can finish a baccalaureate degree in four years, some programs offered by the university may require the completion of more than 120 credits. Entering freshman students are encouraged to seek academic advice early regarding specific requirements in order to plan their program most efficiently.

Bachelor of Arts

The Bachelor of Arts (B.A.) degree programs are designed for those students who wish to pursue their studies in the liberal arts tradition. The degree is awarded upon the satisfactory completion of a minimum of 120 credits, excluding credits in courses numbered below 100, which must include the liberal education requirements, the requirements of a field of concentration, and 40 credits in upper division (300-400 level) courses. The field of concentration requirements may be met by one of the following:

1. 45 credit major
2. Majors below 45 credits require one year in a single foreign language OR a minor.

Bachelor of Elective Studies

The Bachelor of Elective Studies (B.E.S.) degree is for those students who wish to develop their own programs of study. B.E.S. students must complete the liberal education program. Contact the Advising and Student Transitions Office (320-308-6075) for details. Requirements for the degree are:

1. Completion of a minimum of 120 credits, excluding credits in courses numbered below 100, with a 2.00 "C" average.
2. At least 40 credits in upper-division (300-400) courses.
3. No more than 60 credits can be counted in any one discipline.
4. A maximum of 6 internship credits may be used as part of the 40 upper-division course work requirement.
5. A departmental major or minor is not required, but strongly encouraged. Students may complete majors and minors in those departments which indicate B.E.S. programs are available. See individual departmental listings.
6. Meet the residence requirement of St. Cloud State University as outlined in this catalog.

Students who meet the admission requirements for St. Cloud State University may apply upon admittance. Students who currently are enrolled must have a 2.0 (C) average to be admitted to the program. To be accepted into this degree option students must formally complete a "major program plan" as well as a "program proposal form" which are designed to describe the student's individual educational objectives. Majors or minors earned under the B.E.S. program may be applied to a B.E.S. degree. Requests for admission are received by the program director in the Advising and Student Transitions Office (320-308-6075).

Bachelor of Fine Arts

The Bachelor of Fine Arts (B.F.A.) Degree is designed for those students whose primary interest is in obtaining depth, structure, and professionalism in a particular area of the visual arts. 78 credits in art and 40 credits in upper division (300-400 level) courses are required. Additional details of the program are listed in the art department offerings. The degree is awarded upon the satisfactory completion of a minimum of 120 credits, excluding credits in courses numbered below 100.

Bachelor of Music

The Bachelor of Music (B.Mus.) degree is for those students whose primary interest is musical performance; 80-83 credits in music and 40 credits in upper division (300-400) courses are required. The degree is awarded upon the satisfactory completion of a minimum of 120 credits, excluding credits in courses numbered below 100. Students are required to study voice or their major instrument each semester and to give recitals at the end of both the junior and senior years. Additional details of the program are listed in the music department offerings.

Bachelor of Science

The Bachelor of Science (BS) degree is awarded to those students who successfully complete a professional four-year program of a minimum of 120 credits, excluding credits in courses numbered below 100 and including general education requirements, the requirements of a field of concentration, and 40 credits in upper division (300-400 level) courses. Students seeking a teaching certificate also must complete the professional education requirements. Students in the Herberger Business School must complete the business core. Requirements for specific programs can be found under departmental headings in this catalog.

Associate degrees (A.A. and A.S.)

Associate of Arts (A.A.)

The Associate of Arts degree programs are intended to provide a broad liberal arts and sciences background. A.A. programs require completion of the liberal education program and additional credits to total at least 60 credits, excluding credits in courses numbered below 100. The A.A. program may be used as the foundation for a baccalaureate degree and is administered by the Advising and Student Transitions Office (320-308-6075). Students receiving an A.A. degree must complete at least 30 additional credits at SCSU to receive a baccalaureate degree (minimum of 120 semester credits required).

Associate of Science (A.S.)

The Associate of Science degree programs provide students an opportunity to design their own two year programs of study. It requires the completion of 60 credits, excluding credits in courses numbered below 100, with no more

than 30 credits in one discipline. The program is administered by the Advising and Student Transitions Office (320-308-6075).

Certificate Program

A certificate is awarded to those students who satisfactorily complete a prescribed course of study. Specific program requirements are given under departmental headings.

Graduate Degrees

Doctor of Education

The doctor of education degree is designed to prepare students for administrative leadership, academic or clinical positions in educational disciplines. The degree requires 72 semester credits of graduate study, at least 60% of which will be met through coursework designated as doctoral only, those numbered 800-899..

Specialist

The specialist degree is designed to serve a qualitative need for highly trained specialists in various fields. The emphasis in a specialist degree program is placed on the development of competencies needed for a specific job category. The program is designed to meet the needs of students in professional areas where a master's degree is not sufficient. The program requires 30 semester credits of graduate study beyond a master's degree.

The specialist degree program is offered by the Department of Educational Leadership. The specialist degree program offered by the Department of Educational Leadership is designed for three distinct groups: the K-12 school principal, the superintendent of schools, and the director of special education.

Master of Arts

The master of arts degree offers the candidate the opportunity to specialize in a particular subject matter field. It is open to students with undergraduate liberal arts backgrounds as well as students who have completed teacher education programs. Programs of study leading to the master of arts degree have been approved for the following majors: art; biology: cell and molecular biology, biology: ecology and natural resources biology; English, English: college teaching, English: rhetoric and applied writing, English: teaching English as a second language; history, history: public history, and special studies. The degree requires a range of 30 - 54 graduate credits as noted in the program requirements, 50% of which must be completed at the graduate only (600) level. All master of arts programs require a thesis, creative work, starred paper(s), or final written comprehensive examination. Information concerning the program requirements for a particular major may be found with the course offerings for the department.

Master of Business Administration

The master of business administration degree develops professional managers for public and private sectors. It stresses conceptual, analytical and behavioral skills relevant to organization and leadership, provides students the opportunity to develop specialized competencies reflecting individual aptitudes and interests, and explores the relationships between organizations and their environment. The degree requires a range of 30 - 54 graduate credits as noted in the program requirements, 50% of which must be completed at the graduate only (600) level.

Master of Engineering Management

The master of engineering management degree prepares graduates for taking on managerial roles in technical and scientific organizations. The master of engineering management is for engineers, technologists and scientists who are looking for managerial skills to advance to executive positions in technology based business. The degree requires a range of 30 - 54 graduate credits as noted in the program requirements, 50% of which must be completed at the graduate only (600) level.

Master of Music

The master of music degree allows the student to pursue a degree in music with an emphasis in music education, piano pedagogy, or conducting. The degree requires a range of 30 - 54 graduate credits as noted in the program requirements, 50% of which must be completed at the graduate only (600) level.

Master of Science

The master of science degree is designed to provide preparation in a variety of professional fields. The degree requires a range of 30 - 60 graduate credits as noted in the program requirements, 50% of which must be completed at the graduate only (600) level.

Eligibility for programs in teacher education is limited to students whose undergraduate preparation qualifies them for teacher licensure.

Master of Social Work

The master of social work degreeis considered a terminal practice degree in the field of social work and prepares professionals to think critically, and work effectively and collaboratively in social services. The degree requires a range of 30 - 54 graduate credits as noted in the program requirements, 50% of which must be completed at the graduate only (600) level.

Special Studies

Special studies programs (M.A. or M.S.) are intended to meet the specialized needs of students whose educational or career goals can be best served by carefully designed programs which provide advanced study in two or three related academic disciplines. To be considered for approval, special studies programs must provide a clear focus on a field of study which combines the contributions of these academic disciplines in a multi-disciplinary major.

To request consideration of a special studies program, the student must prepare a written proposal which contains the following elements: proposed title for the multidisciplinary program, a discussion of the contributions of the disciplines which would comprise the program, a preliminary list of potentially applicable courses, and a summary of the student's educational and career objectives, philosophy and background. Each special studies applicant is interviewed by a four-member committee chaired and appointed by the graduate dean. The committee reviews the program proposal and makes a recommendation based upon the appropriateness of the proposal as a field for graduate study, the availability of adequate curricular and other resources to insure a strong program, and the qualifications of the individual applicant. A special studies degree requires a range of 30 - 54 graduate credits as approved by the admission committee, 50% of which must be completed at the graduate only (600) level. For further information concerning application procedures and program requirements, contact the School of Graduate Studies.

Graduate Certificates

A graduate certificate is awarded upon completion of a minimum of 9 graduate credits in a focused area of study at St. Cloud State University. A graduate certificate requires 9 - 42 credits completed at the graduate level (500/600) as noted in the individual program requirements.

Declaring a Major

Declaring a Major (Undergraduate)

- Majors and minors are listed on the Undergraduate Programs page, and in each department's program description.
- Each academic department will determine eligibility requirements, academic standards, and length of validity of application, with revalidation required after 7 years. To graduate after the valid application time, a student may be required to meet new major program requirements.
- Students are encouraged to declare a major as early as possible.
- Students who have completed 80 credits at St. Cloud State University and have not declared a major or a B.E.S. degree program will not be allowed to register for a subsequent term. Transfer students who

completed 45 or more credits at another institution(s) before admission to SCSU, have completed 35 or more credits at SCSU, and have not declared a major or B.E.S. degree program will not be allowed to register for a subsequent term. Exceptions may be made by the SCSU Advising Center.

- Students interested in minors should contact the appropriate departments.

Class Ranking

For admission to **sophomore** standing, a student must have completed a minimum of 30 or more semester credits.

To achieve **junior** standing, a student must have completed 60 or more semester credits.

To achieve **senior** standing, a student must have completed 90 or more semester credits.

Keys to Symbols

Semester offered

Fall	F
Spring	S
Summer	SUM
Offered upon sufficient demand	DEMAND
Offered odd years Fall term	Odd F
Offered odd years Spring term	Odd S
Offered even years Fall term	Even F
Offered even years Spring term	Even S

Semester course designations are provided to assist in program planning. Courses are scheduled to be offered in the semester specified; however, circumstances and problems may necessitate change. Consult the current class schedule for further information.

Abbreviations

Cr.	Credit
Undgr.	Undergraduate
Gr.	Graduate
Prereq.	Prerequisite
Lab.	Laboratory

Academic Abbreviations

ACCT	Accounting
AFST	African Studies
AHS	Atmospheric and Hydrologic Sciences
ANTH	Anthropology
ASTR	Astronomy
ART	Art
BIOL	Biological Sciences
BLAW	Business Law
CHEM	Chemistry
CFS	Child and Family Studies
CSD	Communication Sciences & Disorders
CMST	Communication Studies
HUMS	Humanities
HURL	Human Relations and Multicultural Education
IA	Information Assurance
IM	Information Media
IS	Information Systems
JPN	Japanese
JWST	Jewish Studies
LAST	Latin American Studies
MGMT	Management
MKTG	Marketing
COMM	Mass Communications
MATH	Mathematics

CPSY	Community Psychology
CMTY	Planning & Community Development
CNA	Computer Networking & Applications
CSCI	Computer Science
CEEP	Counselor Education & Educational Psychology
CJS	Criminal Justice
COLL	College Transitions
DANC	Dance
EAST	East Asian Studies
ECE	Electrical and Computer Engineering
ECON	Economics
EDAD	Educational Administration
ENGR	Engineering Science
ENGL	English
ESL	English as a Second Language
ETHS	Ethnic Studies
ETS	Environmental & Technological Studies
FS	Film Studies
FIRE	Finance, Insurance and Real Estate
FORL	Foreign Languages
FREN	French
GEOG	Geography and Planning
GER	German
GERO	Gerontology
GLST	Global Studies
GWS	Gender and Women's Studies
HLTH	Health
HIED	Higher Education
HIST	History
HONS	Honors
HPE	Health and Physical Education
MME	Mechanical & Manufacturing Engineering
MLS	Medical Laboratory Science
MEDT	Medical Technology
MUSE	Music Education
MUSM	Music Musicianship
MUSP	Music Performance
NMDT	Nuclear Medicine Technology
NURS	Nursing
PHIL	Philosophy
PESS	Physical Education and Sport Science
PHYS	Physics
PNI	Public Non Profit
POL	Political Science
PSEL	Public Safety Executive Leadership
PSY	Psychology
RADT	Radiologic Technology
REC	Recreation
REL	Religious Studies
RUSS	Russian
SCI	Sciences
SSCI	Social Science
SST	Social Studies
SW	Social Work
SOC	Sociology
SOV	Soviet Studies
SPED	Special Education
STAT	Statistics
SPAN	Spanish
ED	Teacher Development
TH	Theatre
TSE	Traffic Safety Education